REXAHN PHARMACEUTICALS, INC.

Form S-3 July 30, 2008

As filed with the Securities and Exchange Commission on July 30, 2008

Registration No. 333-[]

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

REXAHN PHARMACEUTICALS, INC.

(Name of small business issuer in its charter)

Delaware 2834 11-3516358
(State or other jurisdiction of (Primary Standard Industrial incorporation or organization) Classification Code Number) identification number)

9620 Medical Center Drive Rockville, Maryland 20850 (240) 268-5300

(Address and telephone number of principal executive offices)

Chang H. Ahn
Chairman and Chief Executive Officer
Rexahn Pharmaceuticals, Inc.
9620 Medical Center Drive
Rockville, Maryland 20850
(240) 268-5300

(Name, address and telephone number of agent for service)

Copies to:

Sean P. McGuinness, Esq. Chadbourne & Parke LLP 1200 New Hampshire Avenue, N.W. Washington, DC 20036 (202) 974-5600

Approximate date of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

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

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

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

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

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. £

Approximate date of commencement of proposed sale to the public: From time to time as described in the prospectus after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. £

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. R

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. £

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. £

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities	Amounts to be	Proposed Maximum Offering Price per Unit	Proposed Maximum Aggregate Offering Price	Amount of
to be Registered (1)(2)	Registered (3)	(3)	(3)(4)	Registration Fee (4)
Common Stock, par				
value \$0.0001 per share				
Preferred Stock, par				
value \$0.0001 per share				
Warrants				
Debt Securities				
Total			\$60,000,000 (2)	\$2,358

- (1) Not specified as to each class of security to be registered pursuant to General Instruction II.D of Form S-3.
- (2) In addition to the securities issued directly under this Registration Statement, we are registering an indeterminate number of shares of common stock and preferred stock as may be issued upon conversion, exercise or exchange of the securities issued directly under this Registration Statement. No separate consideration will be received for any shares of common stock and preferred stock so issued upon conversion or exchange.
- (3) An indeterminate number of shares of common stock, shares of preferred stock and warrants as may be issued from time to time at indeterminate prices are being registered hereby. In no event will the aggregate initial public offering price of all securities issued from time to time pursuant to this Registration Statement exceed \$60,000,000.
- (4) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) of the Securities Act.

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

The information in this prospectus is not complete and may be changed. We may not sell these securities until the Registration Statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PROSPECTUS

Subject to Completion
Dated July 30, 2008

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

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

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

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

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

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

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

Neither the Securities and Exchange Commission nor any state securities co these securities or passed upon the adequacy or accuracy of this prospectus. criminal offense.	**
The date of this prospectus is	,

TABLE OF CONTENTS

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

Table of Contents

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, ArchexinTM, 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. ArchexinTM 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 SerdaxinTM for treatment of depression, and ZoraxelTM for treatment of sexual dysfunction. ZoraxelTM 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 SerdaxinTM are also planned in 2008.

Table of Contents

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.

Table of Contents

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."

Table of Contents

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").

/

Table of Contents

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.

Table of Contents

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;

Table of Contents

- 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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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 10

Table of Contents

• 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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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.

Table of Contents

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:

17

Table of Contents

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.

18

Table of Contents

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated costs and expenses in connection with the sale and distribution of the securities being registered, all of which will be paid by the Company.

		To be Paid By The	
	Co	ompany	
SEC Registration	\$	2,358	
Accounting fees and expenses		5,000	
Printing fees and expenses		5,000	
Legal fees and expenses		35,000	
Miscellaneous expenses		5,000	
Total	\$	52,358	

Item 15. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law ("DGCL") permits, under certain circumstances, the indemnification of any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative other than an action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving in a similar capacity for another enterprise at the request of the corporation. To the extent that a director, officer, employee or agent of the corporation has been successful in defending any such proceeding, the DGCL provides that he shall be indemnified against expenses (including attorneys' fees), actually and reasonably incurred by him in connection therewith. With respect to a proceeding by or in the right of the corporation, such person may be indemnified against expenses (including attorneys' fees), actually and reasonably incurred, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation. The DGCL provides, however, that indemnification shall not be permitted in such a proceeding if such person is adjudged liable to the corporation unless, and only to the extent that, the court, upon application, determines that he is entitled to indemnification under the circumstances. With respect to proceedings other than those brought by or in the right of the corporation, notwithstanding the outcome of such a proceeding, such person may be indemnified against judgments, fines and amounts paid in settlement, as well as expenses, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action, had no reason to believe his conduct was unlawful. Except with respect to mandatory indemnification of expenses to successful defendants as described in the preceding paragraph or pursuant to a court order, the indemnification described in this paragraph may be made only upon a determination in each specific case (1) by majority vote of the directors that are not parties to the proceeding, even though less that a quorum, or (2) by a committee of the directors that are not a party to the proceeding who have been appointed by a majority vote of directors who are not party to the proceeding, even though less than a quorum, or (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (4) by the stockholders.

The DGCL permits a corporation to advance expenses incurred by a proposed indemnitee in advance of final disposition of the proceeding, provided that the indemnitee undertakes to repay such advanced expenses if it is ultimately determined that he is not entitled to indemnification. Also, a corporation may purchase insurance on behalf of an indemnitee against any liability asserted against him in his designated capacity, whether or not the corporation

itself would be empowered to indemnify him against such liability.

Table of Contents

The Company has adopted provisions in its Amended and Restated Bylaws that in effect provide for indemnification of its officers and directors to the maximum extent permitted under the DGCL. As authorized by the DGCL, the Company's Amended and Restated Certificate of Incorporation limits the liability of directors of the Company for monetary damages. The effect of this provision is to eliminate the rights of the Company and its stockholders to recover monetary damages against a director for breach of the fiduciary duty of care as a director except in certain limited situations. This provision does not limit or eliminate the rights of the Company or any stockholder to seek non-monetary relief such as an injunction or rescission in the event of a breach of a director's duty of care. These provisions will not alter the liability of directors under federal securities laws. We have also entered into agreements with our directors and certain of our executive officers that require us to indemnify them against certain liabilities that may arise by reason of their status or service as directors or executive officers to the fullest extent not prohibited by Delaware law. The Company has purchased an insurance policy that purports to insure the officers and directors of the Corporation against certain liabilities incurred by them in the discharge of their functions as such officers and directors. The foregoing descriptions are only general summaries. For additional information please see the full text of our Amended and Restated Certification of Incorporation., filed as Appendix A to our definitive proxy statement on Schedule 14A dated April 29, 2005.

Item 16. Exhibits

The exhibits listed on the Index to Exhibits of this Registration Statement are filed herewith or are incorporated herein by reference to other filings.

Item 17. Undertakings

- A. The undersigned Registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
- (i) To include any Prospectus required by section 10(a)(3) of the Securities Act of 1933;
- (ii) To reflect in the Prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of Prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement;
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, however, that:

Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) (§230.424(b) of this chapter) that is part of the registration statement.

Table of Contents

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
- (i) If the Registrant is relying on Rule 430B (§230.430B of this chapter):
- (A) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) (§230.424(b)(3) of this chapter) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
- (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) (§230.424(b)(2), (b)(5), or (b)(7) of this chapter) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) (\$230.415(a)(1)(i), (vii), or (x) of this chapter) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or
- (ii) If the Registrant is subject to Rule 430C (§230.430C of this chapter), each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A (§230.430A of this chapter), shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (5) That, for the purpose of determining liability of the Registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424 (§230.424 of this chapter);

Table of Contents

- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.
- B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering.
- C. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

Table of Contents

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Rockville, State of Maryland, on July 29, 2008.

REXAHN PHARMACEUTICALS, INC.

By: /s/ Chang H. Ahn

Chang H. Ahn

Chairman of the Board, Chief Executive

Officer and Director

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Chang H. Ahn Chang H. Ahn	Chairman of the Board, Chief Executive Officer and Director (Principal Executive Officer)	July 28, 2008
/s/ Tae Heum Jeong Tae Heum Jeong	Chief Financial Officer, Secretary and Director (Principal Financial and Accounting Officer)	July 28, 2008
/s/ Charles Beever Charles Beever	Director	July 25, 2008
/s/ Kwang Soo Cheong Kwang Soo Cheong	Director	July 25, 2008
/s/ Freddie Ann Hoffman Freddie Ann Hoffman	Director	July 28, 2008
/s/ Y. Michele Kang Y. Michele Kang	Director	July 28, 2008
/s/ David McIntosh David McIntosh	Director	July 29, 2008
II - 5		

Table of Contents

INDEX TO EXHIBITS

The following documents are filed herewith (unless otherwise indicated) and made a part of this registration statement.

Exhibit 3.1	Amended and Restated Certificate of Incorporation of Rexahn Pharmaceuticals, Inc. filed as
	Appendix G to the Registrant's definitive proxy statement on Schedule 14A (File no. 000-50590) dated
	April 29, 2005, is incorporated herein by reference.
Exhibit 3.2	Amended and Restated Bylaws of Rexahn Pharmaceuticals, Inc., filed as Appendix A to the
	Registrant's definitive proxy statement on Schedule 14A (File no. 000-50590) dated April 29, 2005, is
	incorporated herein by reference.
Exhibit 4.1	Specimen Common Stock Certificate, filed as Exhibit 4.4 to the Registrant's Registration Statement on
	Form S-8 (File No. 333-129294) dated October 28, 2005, is incorporated by reference herein.
Exhibit 4.2	Form of Senior Debt Securities Indenture.
Exhibit 4.3	Form of Subordinated Debt Securities Indenture.
Exhibit 5.1	Opinion of Chadbourne & Parke LLP.
Exhibit 23.1	Consent of Lazar Levine & Felix LLP.
Exhibit 23.2	Consent of Chadbourne & Parke LLP (included in Exhibit 5.1).
Exhibit 24.1	Power of Attorney

If necessary, the Registrant will file as an exhibit to an amendment to the Registration Statement or to a report filed under the Exchange Act (i) any underwriting, remarketing or agency agreement relating to securities offered hereby, (ii) the instruments setting forth the terms of any debt securities, preferred stock, warrants or units, (iii) any additional required opinions of counsel with respect to legality of the securities offered hereby, (iv) a statement of computation of ratio of earnings to fixed charges, (v) the Statement of Eligibility and Qualification under the Trust Indenture Act of 1939 of the Trustee on Form T-1 and (vi) any required opinion of counsel to the Registrant as to certain tax matters relative to securities offered hereby.

The Registrant undertakes to provide to each stockholder requesting the same a copy of each exhibit referred to herein upon payment of a reasonable fee limited to the Registrant's reasonable expenses in furnishing such exhibit.