

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**Form S-3**  
**REGISTRATION STATEMENT  
UNDER THE SECURITIES ACT OF 1933**

**REXAHN PHARMACEUTICALS, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of incorporation or organization)

**11-3516358**

(I.R.S. Employer Identification Number)

**15245 Shady Grove Road, Suite 455  
Rockville, Maryland 20850  
(240) 268-5300**

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

**Peter D. Suzdak  
Chief Executive Officer  
Rexahn Pharmaceuticals, Inc.  
15245 Shady Grove Road, Suite 455  
Rockville, Maryland 20850  
(240) 268-5300**

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

***with copies to:*  
Asher M. Rubin  
William I. Intner  
Hogan Lovells US LLP  
100 International Drive, Suite 2000  
Baltimore, Maryland 21202  
(410) 659-2700**

**Approximate date of commencement of proposed sale to the public:** From time to time on or 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. ☒

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. ☐

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

Large accelerated filer ☐

Non-accelerated filer ☐ (Do not check if a smaller reporting company)

Accelerated filer ☐

Smaller reporting company ☒

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**CALCULATION OF REGISTRATION FEE**

<b>Title of Each Class of Securities to be Registered<sup>(1)</sup></b>	<b>Amount to be Registered<sup>(3)</sup></b>	<b>Proposed Maximum Offering Price per Unit<sup>(3)</sup></b>	<b>Proposed Maximum Aggregate Offering Price<sup>(3)(4)</sup></b>	<b>Amount of Registration Fee<sup>(4)</sup></b>
Common Stock, par value \$0.0001 per share				
Preferred Stock, par value \$0.0001 per share				
Warrants				
Units <sup>(2)</sup>				
<b>Total</b>			<b>\$ 150,000,000.00</b>	<b>\$ 19,320.00</b>

- (1) Not specified as to each class of security to be registered pursuant to General Instruction II.D. of Form S-3 under the Securities Act of 1933, as amended (the "Securities Act").
- (2) Each unit will be issued under a unit agreement and will represent an interest in any combination of common stock, preferred stock or warrants, which may or may not be separable from one another.
- (3) Being registered hereby are an indeterminate number of securities of each identified class as may be issued from time to time at indeterminate prices, as well as an indeterminate number of shares of common stock and preferred stock as may be issued upon conversion, exercise or exchange of any of the securities issued directly under this registration statement. No separate consideration is payable for any shares of common stock and preferred stock so issued upon conversion, exercise or exchange. Securities registered hereby may be sold separately, together or in units with other securities registered hereby.
- (4) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) of the Securities Act.

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

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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.

Subject to Completion, dated May 23, 2014.

## PROSPECTUS



### UP TO \$150,000,000 OF OUR COMMON STOCK PREFERRED STOCK WARRANTS UNITS

We may from time to time offer up to \$150,000,000 in total of:

- shares of our common stock, par value \$0.0001 per share;
- shares of our preferred stock, par value \$0.0001 per share;
- warrants to purchase shares of common stock or preferred stock; or
- units (any combination of our common stock, preferred stock or warrants).

We may offer the common stock, preferred stock, warrants and units 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 and warrants we may offer may be convertible into or exercisable or exchangeable for common or preferred stock or other securities of ours or equity securities 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 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 any applicable prospectus supplement 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 NYSE MKT 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 an accompanying prospectus supplement, if applicable.

**Investing in our securities involves risks. Please see "Risk Factors" on page 4 for more information. You should read carefully this prospectus, the documents incorporated by reference in this prospectus and any prospectus supplement before you invest.**

**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 \_\_\_\_\_, 2014

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (“SEC”) using a “shelf” registration process. Under this shelf registration process, we may from time to time offer up to \$150,000,000 in total of (i) shares of our common stock, par value \$0.0001 per share, (ii) shares of our preferred stock, par value \$0.0001 per share, in one or more series, (iii) warrants to purchase shares of common stock or preferred stock or (iv) any combination of our common stock, preferred stock or warrants, 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 units 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 \$150,000,000 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 with specific information about the terms of that offering and may also provide a free writing prospectus. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus. If there is any inconsistency between the information in this prospectus and the prospectus supplement, you should rely on the information in the prospectus supplement. 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” and “Incorporation of Certain Information by Reference.”

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 website or at the SEC offices mentioned below under the heading “Where You Can Find More Information.”

We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus, any accompanying supplement to this prospectus or any free writing prospectus that may be incorporated by reference into this prospectus or any prospectus supplement or any documents incorporated by reference into this prospectus or any prospectus supplement. We take no responsibility for any information or representation not contained or incorporated by reference in this prospectus or any accompanying prospectus supplement or any free writing prospectus. Neither this prospectus nor any accompanying prospectus supplement nor any free writing prospectus constitute an offer to sell or the solicitation of an offer to buy any securities other than the common stock to which they relate, nor do this prospectus or any accompanying prospectus supplement or any free writing prospectus constitute an offer to sell or the solicitation of an offer to buy common stock in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus or any accompanying prospectus supplement or any free writing prospectus or any other offering materials is accurate on any date subsequent to the date set forth on the front of such document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus or any accompanying prospectus supplement or any free writing prospectus is delivered or securities are sold on a later date.

Unless the context otherwise requires or as otherwise expressly stated, references in this prospectus to the “Company,” “Rexahn,” “we,” “us,” “our” and similar terms refer to Rexahn Pharmaceuticals, Inc.

## SUMMARY

*This summary contains a general summary of the information contained in this prospectus. It may not include all the information that is important to you. You should read the entire prospectus, the prospectus supplement delivered with the prospectus, if any, and the documents incorporated by reference before making an investment decision.*

### Our Company

We are a clinical development stage biopharmaceutical company dedicated to the discovery, development and commercialization of innovative treatments for cancer patients that target specific proteins that are over expressed in cancer cells and not present in normal healthy tissues resulting in increased efficacy and reduced side effects. This approach differs from existing chemotherapeutic agents that inhibit the growth of both cancer cells and normal healthy tissues at similar doses. Our pipeline features one oncology candidate in Phase II clinical trials, two oncology candidates in Phase I clinical trials, two drug candidates not currently being actively developed and several other drug candidates in pre-clinical development. Our strategy is to continue building a significant product pipeline of innovative drug candidates that we will commercialize alone or with partners. We intend to initially develop drug candidates for cancers that are orphan indications and then expand into more highly prevalent cancers.

Since our inception, our efforts and resources have been focused primarily on developing our pharmaceutical technologies, raising capital and recruiting personnel. As a development stage company, we have no product sales to date, and we will not generate any product sales until we receive approval from the Food and Drug Administration (the “FDA”) or equivalent foreign regulatory bodies to begin selling our pharmaceutical candidates. Our major sources of working capital have been proceeds from various private financings, primarily private sales of common stock and debt securities and collaboration agreements with our strategic investors.

Our three clinical stage drug candidates in active development are Archexin, RX-3117 and Supinoxin (RX-5902).

### **Archexin®**

Archexin is a potential best-in-class, potent inhibitor of the protein kinase phosphorylated Akt-1, which is over expressed in cancer cells and which we believe plays a critical role in cancer cell proliferation, survival, angiogenesis, metastasis and drug resistance. Archexin has received “orphan drug” designation from the FDA, for renal cell carcinoma, (“RCC”), glioblastoma, ovarian cancer, stomach cancer and pancreatic cancer. That designation provides tax incentives for clinical research and a waiver of user fees. In addition, a drug that is approved for its orphan-designated use receives seven years of exclusivity after approval, during which the FDA generally cannot approve another product with the same active moiety for the same indication.

In August 2012, we announced top line results of an open label 2-stage Phase IIa clinical trial for Archexin that was designed to assess the safety and efficacy of Archexin in combination with gemcitabine. Gemcitabine is used to treat pancreatic, breast, ovarian and lung cancers. Gemcitabine is a member of a group of chemotherapy drugs known as anti-metabolites. It prevents cells from making DNA and RNA, which stops cell growth and causes cells to die. Stage 1 was the dose-finding portion of the study, and Stage 2 was the dose-expansion portion of the study using the dose identified in Stage 1 administered with gemcitabine. The study enrolled 31 subjects aged 18 to 65 with metastatic pancreatic cancer at nine centers in the United States and India. The primary endpoint was overall survival following four cycles of therapy with a six month follow-up. For those evaluable patients, the study demonstrated that treatment with Archexin in combination with gemcitabine provided a median survival rate of 9.1 months compared to the historical survival data of 5.65 months for standard single agent gemcitabine therapy. The most frequent reported adverse events were constipation, nausea, abdominal pain and pyrexia, regardless of relatedness.

We initiated a Phase IIa clinical proof-of-concept clinical trial of Archexin in January 2014 to study its safety and efficacy in patients with metastatic RCC. In the trial, Archexin will be administered in combination with everolimus (Afinitor®), and will be conducted in two stages. The first stage will be dose ranging, with up to three cohorts of three RCC patients to determine its maximal tolerated dose (“MTD”) in combination with everolimus. Once the MTD has been determined, 30 RCC patients will be randomized to either Archexin in combination with everolimus or everolimus alone, in a ratio of 2:1.

### ***RX-3117***

RX-3117 is a small molecule nucleoside compound with an anti-metabolite mechanism of action, and we believe it has therapeutic potential in a broad range of cancers including colon, lung, and pancreatic cancer. RX-3117 has also been shown to be effective in inhibiting the growth of gemcitabine-resistant human cancers and in improving overall survival in pre-clinical animal models. We completed an exploratory Phase I clinical study of RX-3117 in 2012 that demonstrated the oral bioavailability of RX-3117 in humans with no adverse effects reported in the study. In January 2014, we initiated a Phase Ib clinical trial to study the safety, tolerability, dose-limiting toxicities and MTD of RX-3117 in patients with solid tumors. Secondary endpoints will include characterizing the pharmacokinetic profile of RX-3117 and evaluating the preliminary anti-tumor effects of RX-3117. One dose cycle (30mg) has been completed and the second dose cycle (100mg) is ongoing.

### ***Supinoxin (RX-5902)***

Supinoxin is a potential first-in-class small molecule that inhibits the phosphorylation of p68 RNA helicase, a protein that we believe plays a key role in cancer growth, progression and metastasis. Phosphorylated p68, which is highly expressed in cancer cells, but not in normal cells, results in up-regulation of cancer-related genes and a subsequent proliferation or tumor growth of cancer cells. Supinoxin selectively blocks phosphorylated p68, thereby decreasing the proliferation or growth of cancer cells. In pre-clinical tissue culture models and in-vivo xenograft models, Supinoxin has demonstrated synergism with cytotoxic agents and activity against drug resistant cancer cells. In particular, in in-vivo xenograft models of human renal cell carcinoma and pancreatic cancer, treatment with Supinoxin on days 1 to 20 in mouse models produced a survival benefit beyond 65 days. In July 2012, we submitted an investigational new drug (“IND”) application to the FDA for Supinoxin. We initiated a Phase I clinical trial in August 2013 to study Supinoxin’s safety and efficacy in patients with solid tumors. The MTD of Supinoxin has not yet been achieved. Three dosing cycles have been completed (25, 50 and 100mg) and no drug related adverse events have been reported. The fourth dosing cycle (150 mg) is ongoing.

In addition to these drug candidates, we also have three drug candidates in pre-clinical development: Archexin-Nano, which may provide significant clinical benefits, including targeted higher cellular intake, extended circulation time, reduced drug toxicity and improved efficacy; RX-0047-Nano, which is a potent inhibitor of HIF-1 $\alpha$ , a key transcription factor involved in cancer cell survival, metastasis and angiogenesis; and RX-21101, an (N-(2-Hydroxypropyl) methacrylamide-docetaxel-folate, which may bolster efficacy against tumors while lowering toxicity by specific tumor targeting and increased stability in the body.

In addition to our drug development, we are also working on proprietary research technologies, including our multi-target aimed ligands platform and nano-based drug delivery systems. Our unique ligand discovery platform, The Inhibitors of Multi-Expression Signals, permits us to identify potentially important targets that control multiple genes or signaling events in cancer cells. Our 3-D Gateway of Ligand Discovery integrates three-dimensional molecular modeling with databases of chemicals and proteins and ligand filtering and generation, which helps us discover novel lead compounds. Leveraging this system, we believe that we are able to effectively develop predictive models, formulate and test hypotheses for optimizing efficacy and increase drug safety and bioavailability early in the drug discovery process. Our nano-based drug delivery systems, such as those used in the multiple nanoliposomal- and nanopolymer-based anticancer drugs that we are currently testing, may increase the availability of a drug at the disease site, minimize adverse reactions and provide longer duration of action.

### **Principal Executive Offices**

Our principal executive offices are located at 15245 Shady Grove Road, Suite 455, Rockville, Maryland 20850, and our telephone number is (240) 268-5300.

### **Securities We Are Offering**

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

- shares of our common stock;
- shares of our preferred stock



- warrants to purchase shares of common stock or preferred stock; or
- units (any combination of our common stock, preferred stock or warrants).

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 \$150,000,000. This prospectus, including the following summary, describes the general terms that may apply to the securities. We will describe the specific terms of any particular securities that we may offer 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 NYSE MKT under the symbol “RNN.”

*Preferred Stock.* We may offer shares of 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.

*Units.* We may offer any combination of one or more of the other securities described in this prospectus, together as units. In a prospectus supplement, we will describe the particular combination of securities constituting any units and any other specific terms of the units.

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

#### **Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends**

The table below presents the ratio of earnings to combined fixed charges and preferred stock dividends and the coverage deficiency for the last five fiscal years and the three months ended March 31, 2014.

	<b>For the Three Months Ended March 31, 2014</b>	<b>For the Year Ended December 31,</b>				
		<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
Ratio of earnings to combined fixed charges and preferred stock dividends	Deficiency	Deficiency	Deficiency	Deficiency	Deficiency	Deficiency
Deficiency (in thousands)	\$ (14,600)	\$ (9,499)	\$ (6,227)	\$ (11,345)	\$ (14,022)	\$ (2,903)

For the three months ended March 31, 2014 and the years ended December 31, 2013, 2012, 2011, 2010 and 2009, earnings are inadequate to cover fixed charges and the dollar amount of the coverage deficiency is disclosed in the above table, in thousands.

## **RISK FACTORS**

Investing in our securities involves a high degree of risk. You should carefully consider and evaluate all of the information contained in this prospectus, any accompanying prospectus supplement and in the documents we incorporate by reference into this prospectus and any accompanying prospectus supplement before you decide to purchase our securities. In particular, you should carefully consider and evaluate the risks and uncertainties described under the heading “Risk Factors” in each of our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 and our Quarterly Report on Form 10-Q for the three-month period ended March 31, 2014, as well as any risks described in any applicable prospectus supplement, before deciding whether to buy our securities. Any of the risks and uncertainties set forth in those reports, as updated by annual, quarterly and other reports and documents that we file with the SEC and incorporate by reference into this prospectus or a prospectus supplement, could materially and adversely affect our business, results of operations and financial condition, which in turn could materially and adversely affect the value of any securities offered by this prospectus and any accompanying prospectus supplement. As a result, you could lose all or part of your investment.

See also the information contained under the heading “Special Note Regarding Forward-Looking Statements” immediately below.

## **SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS**

Any statements in this prospectus, any accompanying prospectus supplement and the information incorporated herein and therein by reference relating to future financial or business performance, conditions or strategies and other financial and business matters, including expectations regarding future revenues and operating expenses, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements that are not descriptions of historical facts are forward-looking statements and are 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 words such as "believe," "expect," "intend," "may," "will," "should," "anticipate," "estimate" or similar terminology. Although we believe that the expectations reflected in our forward-looking statements are reasonable as of the date we make them, actual results could differ materially from those currently anticipated due to a number of factors, including risks relating to:

- our lack of profitability and the need for additional capital to operate our business;
- our understandings and beliefs regarding the role of certain biological mechanisms and processes in cancer;
- our drug candidates being in early stages of development, including in pre-clinical development;
- our inability to initially develop drug candidates for orphan indications to reduce the time-to-market and take advantage of certain incentives provided by the FDA;
- our inability to transition from our initial focus on developing drug candidates for orphan indications to candidates for more highly prevalent indications;
- our inability to successfully and timely complete clinical trials for our drug candidates in clinical development;
- uncertainties related to the timing, results and analyses related to our drug candidates in pre-clinical development;
- our inability to obtain the necessary U.S. and international regulatory approvals for our drug candidates;
- our reliance on third-party contract research organizations and other investigators and collaborators for certain research and development services;
- our ability to maintain or engage third-party manufacturers to manufacture, supply, store and distribute supplies of our drug candidates for our clinical trials;
- our ability to form strategic alliances and partnerships with pharmaceutical companies and other partners for sales and marketing of certain of our product candidates;
- demand for and market acceptance of our drug candidates; and
- the scope and validity of our intellectual property protection for our drug candidates and our ability to develop our candidates without infringing the intellectual property rights of others.

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

## USE OF PROCEEDS

Except as described in any applicable prospectus supplement in connection with a specific offering, we intend to use the net proceeds from the sale of the securities offered under this prospectus for development of current and future product candidates, clinical trials, operating costs, working capital and general corporate purposes.

## 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.

For example, we may engage in at-the-market offerings into an existing trading market in accordance with Rule 415(a)(4) under the Securities Act of 1933, as amended (the “Securities Act”). We may also sell securities through a rights offering, forward contracts or similar arrangements. In any distribution of subscription rights to stockholders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties.

The securities issued and sold under this prospectus will have no established trading market, other than our common stock, which is listed on the NYSE MKT. Any shares of our common stock sold pursuant to this prospectus will be eligible for listing and trading on the NYSE MKT, subject to official notice of issuance. Any underwriters to whom securities are sold by us for public offering and sale may make a market in the securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. The securities, other than our common stock, may or may not be listed on a national securities exchange or other trading market.

We will describe the method of distribution of the securities in a 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 a prospectus supplement. Unless otherwise indicated in a 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.

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. A prospectus supplement will describe the terms of any direct sales, including the terms of any bidding or auction process.

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. A prospectus supplement will set forth the name of the dealer and the terms of the transactions.

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 a 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 a prospectus supplement.

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. A 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 a 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 NYSE MKT may engage in passive market making transactions in the securities on the NYSE MKT 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.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

In compliance with the guidelines of the Financial Industry Regulatory Authority, Inc. (“FINRA”), the maximum consideration or discount to be received by any FINRA member or independent broker-dealer may not exceed 8% of the aggregate proceeds of the offering.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

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 COMMON STOCK

The following description of our common stock, together with the additional information we include in any applicable prospectus supplement, 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 Delaware General Corporation Law (the “DGCL”) 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 May 20, 2014, there were 177,997,125 shares of common stock issued and outstanding, and there were outstanding warrants to purchase approximately an additional 17,539,759 shares of our common stock and options to purchase 10,082,794 shares of our common stock.

### Listing

Our common stock is listed on the NYSE MKT 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

Holders of our common stock have no preemptive rights and have no other rights to subscribe for additional securities of the Company under Delaware law. Nor does the common stock 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 holding at least a majority of our voting stock 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 Certificate of Incorporation limits 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**

To the maximum extent permitted by law, our Amended and Restated Bylaws provide 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 addition, we must 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 applicable prospectus supplement, 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 DGCL may also affect the terms of our preferred 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 Amended and Restated Certificate of Incorporation 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 Amended and Restated Certificate of Incorporation 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 any 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 DGCL 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

The following description of our warrants, together with the additional information we may include in any applicable prospectus supplement, 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. As of May 20, 2014, we had outstanding warrants to purchase 17,539,759 shares of common stock, having exercise prices ranging from \$0.41 to \$1.90 and expiration dates from June 5, 2014 to January 21, 2019. Those warrants are not related to the registration statement of which this prospectus forms a part and the shares issued to the warrant holders upon exercise will not be issued pursuant to this prospectus or the registration statement.

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 number of shares of common stock and the number of shares of preferred 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.

## DESCRIPTION OF UNITS

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

We may, from time to time, issue units comprised of one or more of the other securities that may be offered under this prospectus, in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately at any time or at any time before a specified date.

The applicable prospectus supplement will describe the following terms of the units in respect of which this prospectus is being delivered:

- the material terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any material provisions relating to the issuance, payment, settlement, transfer or exchange of the units or the securities comprising the units;
- whether the units will be issued fully registered or in global form; and
- any material provisions of the governing unit agreement that differ from those described above.

The description in the applicable prospectus supplement and other offering material of any units we offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable unit agreement, which will be filed with the SEC if we offer units. For more information on how you can obtain copies of the applicable unit agreement if we offer units, see “Where You Can Find More Information.” We urge you to read the applicable unit agreement and the applicable prospectus supplement and any other offering material in their entirety.

## RATIO OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

The table below presents the ratio of earnings to combined fixed charges and preferred stock dividends and the coverage deficiency for the last five fiscal years and the three months ended March 31, 2014.

	For the Three Months Ended March 31, 2014	For the Year Ended December 31,				
		2013	2012	2011	2010	2009
Ratio of earnings to combined fixed charges and preferred stock dividends	Deficiency	Deficiency	Deficiency	Deficiency	Deficiency	Deficiency
Deficiency (in thousands)	\$ (14,600)	\$ (9,499)	\$ (6,227)	\$ (11,345)	\$ (14,022)	\$ (2,903)

For the three months ended March 31, 2014 and the years ended December 31, 2013, 2012, 2011, 2010 and 2009, earnings are inadequate to cover fixed charges and the dollar amount of the coverage deficiency is disclosed in the above table, in thousands.

## INCORPORATION OF CERTAIN INFORMATION 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. 001-34079) under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering of the securities. These documents contain important information about us.

- Our Annual Report on Form 10-K for the year ended December 31, 2013 filed with the SEC on March 21, 2014, together with those portions of our Definitive Proxy Statement on Schedule 14A filed with the SEC on April 18, 2014 and incorporated by reference into our Annual Report on Form 10-K;
- Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2014 filed with the SEC on May 14, 2014;
- Our Current Reports on Form 8-K (other than portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits accompanying such reports that are related to such items) filed with the SEC on January 15, 2014, January 21, 2014, and March 3, 2014;
- 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; and
- 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 of the securities.

We are not, however, incorporating by reference any documents, or portions of documents, whether specifically listed above or arising in the future, which 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 website at <http://www.sec.gov>. You also can obtain these documents from us without charge by visiting our Internet website <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.  
15245 Shady Grove Road, Suite 455  
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 100 F Street, N.E., 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 website 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 website is <http://www.sec.gov>. We also maintain a website at <http://www.rexahn.com>, which provides additional information about us. The contents of our website, however, are not a part of this prospectus.

#### **LEGAL MATTERS**

Hogan Lovells US LLP, Baltimore, Maryland, has passed upon certain legal matters in connection with the securities offered hereby.

#### **EXPERTS**

The financial statements as of and for the years ended December 31, 2013 and 2012, and the cumulative period from March 19, 2001 (inception) to December 31, 2013, incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2013, were audited by ParenteBeard LLC, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

**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 us.

SEC registration fee	\$ 19,320
Accounting fees and expenses	7,000*
Printing fees and expenses	1,000*
Legal fees and expenses	50,000*
Miscellaneous expenses	5,000*
<b>Total</b>	<b>\$ 82,320*</b>

\* Because the amount of securities and number of offerings are indeterminable, all expenses are estimated except for the SEC registration fee.

**Item 15. Indemnification of Directors and Officers.***Delaware General Corporation Law*

Section 145(a) of the Delaware General Corporation Law (the “DGCL”) provides that a corporation may indemnify 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 the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person’s conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of *nolo contendere* or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that the person’s conduct was unlawful.

Section 145(b) of the DGCL states that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys’ fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which the person shall have been adjudged to be liable to the corporation unless and only to the extent that the Delaware Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for such expenses as the Delaware Court of Chancery or such other court shall deem proper.

Section 145(c) of the DGCL provides that to the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsections (a) and (b) of Section 145, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys’ fees) actually and reasonably incurred by such person in connection therewith.

Section 145(d) of the DGCL states that any indemnification under subsections (a) and (b) of Section 145 (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because the person has met the applicable standard of conduct set forth in subsections (a) and (b) of Section 145. Such determination shall be made with respect to a person who is a director or officer at the time of such determination (i) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, (ii) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, (iii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (iv) by the stockholders.



Section 145(f) of the DGCL states that the indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of Section 145 shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office.

Section 145(g) of the DGCL provides that a corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under the provisions of Section 145.

Section 145(j) of the DGCL states that the indemnification and advancement of expenses provided by, or granted pursuant to, Section 145 shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

#### *Certificate of Incorporation and Bylaws*

We have adopted provisions in our Amended and Restated Bylaws that provide for indemnification of our officers and directors to the maximum extent permitted under the DGCL. As authorized by the DGCL, our Amended and Restated Certificate of Incorporation limits the liability of our directors for monetary damages. The effect of this provision is to eliminate our rights and that of our 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 our rights or that of 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.

#### *Indemnification Agreements*

We have 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.

#### *Insurance Policy*

We have purchased an insurance policy that purports to insure our officers and directors against certain liabilities incurred by them in the discharge of their functions as such officers and directors.

The foregoing descriptions are only general summaries.

### **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 Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

- (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) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange 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) that is a part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, 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 a 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:
  - (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) 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) 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) 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.
- (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;
- (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 thereof.
  
- (h) 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.

**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 May 23, 2014.

**Rexahn Pharmaceuticals, Inc.**

By: /s/ Peter D. Suzdak  
 Peter D. Suzdak  
 Chief Executive Officer

**POWER OF ATTORNEY**

Each of the undersigned directors and officers of Rexahn Pharmaceuticals, Inc. hereby constitutes and appoints Peter D. Suzdak and Tae Heum Jeong, and each of them, his or her true and lawful attorneys-in-fact and agents with full power of substitution and resubstitution, for him or her and his or her name, place and stead, in any and all capacities, to execute any and all amendments (including post-effective amendments) to this registration statement, to sign any registration statement related to this registration statement filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, and to cause the same to be filed with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and desirable to be done in and about the premises as fully and to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all acts and things that said attorneys-in-fact and agents or any of them, or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue hereof.

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.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Peter D. Suzdak</u> <b>Peter D. Suzdak</b>	Chief Executive Officer and Director (Principal Executive Officer)	May 23, 2014
<u>/s/ Tae Heum Jeong</u> <b>Tae Heum Jeong</b>	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	May 23, 2014
<u>/s/ Chang H. Ahn</u> <b>Chang H. Ahn</b>	Chairman of the Board	May 23, 2014
<u>/s/ Charles Beever</u> <b>Charles Beever</b>	Director	May 23, 2014
<u>/s/ Peter Brandt</u> <b>Peter Brandt</b>	Director	May 23, 2014
<u>/s/ Mark Carthy</u> <b>Mark Carthy</b>	Director	May 23, 2014
<u>/s/ Kwang Soo Cheong</u> <b>Kwang Soo Cheong</b>	Director	May 23, 2014
<u>/s/ Si Moon Hwang</u> <b>Si Moon Hwang</b>	Director	May 23, 2014
<u>/s/ David McIntosh</u> <b>David McIntosh</b>	Director	May 23, 2014

## INDEX TO EXHIBITS

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

<b>Exhibit Number</b>	<b>Description</b>
1.1*	Form of Underwriting Agreement.
4.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Appendix G to the registrant's Definitive Proxy Statement on Schedule 14A (File No. 000-50590) filed on April 29, 2005).
4.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the registrant's Annual Report on Form 10-K (File No. 001-34079) filed on March 21, 2014).
4.3	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.3 to the registrant's Registration Statement on Form S-8 (File No. 333-129294) filed on October 28, 2005).
4.4*	Certificate of Designations of Preferred Stock.
4.5*	Form of Preferred Stock Certificate.
4.6*	Form of Warrant.
4.7*	Form of Warrant Agreement.
4.8*	Form of Unit.
4.9*	Form of Unit Agreement.
<a href="#">5.1</a>	Opinion of Hogan Lovells US LLP.
<a href="#">12.1</a>	Statement Regarding the Computation of Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends.
<a href="#">23.1</a>	Consent of Independent Registered Public Accounting Firm.
23.2	Consent of Hogan Lovells US LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page to this registration statement).

\* To be filed, if necessary, by amendment or incorporated by reference as an exhibit to a report pursuant to Section 13(a), 13(c) or 15(d) of the Securities Exchange Act of 1934, as amended, in connection with the offering of specific securities.



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May 23, 2014

Board of Directors  
Rexahn Pharmaceuticals, Inc.  
15245 Shady Grove Road, Suite 455  
Rockville, Maryland 20850

Ladies and Gentlemen:

We are acting as counsel to Rexahn Pharmaceuticals, Inc., a Delaware corporation (the “**Company**”), in connection with its registration statement on Form S-3 (the “**Registration Statement**”), filed with the Securities and Exchange Commission relating to the registration for issuance and sale by the Company of up to \$150,000,000 of one or more series of the following securities of the Company: (i) shares of preferred stock, par value \$0.0001 per share (the “**Preferred Shares**”), (ii) shares of common stock, par value \$0.0001 per share (the “**Common Shares**”), (iii) warrants to purchase Preferred Shares (the “**Preferred Stock Warrants**”), (iv) warrants to purchase Common Shares (the “**Common Stock Warrants**”) and (v) units consisting of any combination of two or more of the foregoing (the “**Units**” and together with the Preferred Shares, the Common Shares, the Preferred Stock Warrants and the Common Stock Warrants, the “**Securities**”), all of which may be sold from time to time and on a delayed or continuous basis, as set forth in the prospectus which forms a part of the Registration Statement, and as to be set forth in one or more supplements to the prospectus. This opinion letter is furnished to you at your request to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K, 17 C.F.R. § 229.601(b)(5), in connection with the Registration Statement.

For purposes of this opinion letter, we have examined copies of such agreements, instruments and documents as we have deemed an appropriate basis on which to render the opinions hereinafter expressed. In our examination of the aforesaid documents, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the accuracy and completeness of all documents submitted to us, the authenticity of all original documents, and the conformity to authentic original documents of all documents submitted to us as copies (including telecopies). As to all matters of fact, we have relied on the representations and statements of fact made in the documents so reviewed, and we have not independently established the facts so relied on. This opinion letter is given, and all statements herein are made, in the context of the foregoing.

Hogan Lovells US LLP is a limited liability partnership registered in the District of Columbia. “Hogan Lovells” is an international legal practice that includes Hogan Lovells US LLP and Hogan Lovells International LLP, with offices in: Alicante Amsterdam Baltimore Beijing Brussels Caracas Colorado Springs Denver Dubai Dusseldorf Frankfurt Hamburg Hanoi Ho Chi Minh City Hong Kong Houston Johannesburg London Los Angeles Luxembourg Madrid Miami Milan Moscow Munich New York Northern Virginia Paris Philadelphia Prague Rio de Janeiro Rome San Francisco São Paulo Shanghai Silicon Valley Singapore Tokyo Ulaanbaatar Warsaw Washington DC Associated offices: Budapest Jakarta Jeddah Riyadh Zagreb. For more information see [www.hoganlovells.com](http://www.hoganlovells.com)

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For purposes of this opinion letter, we have assumed that (i) the issuance, sale, amount and terms of any Securities of the Company to be offered from time to time will have been duly authorized and established by proper action of the board of directors of the Company or a duly authorized committee of such board (“**Board Action**”) consistent with the procedures and terms described in the Registration Statement and in accordance with the Company’s charter and bylaws and applicable Delaware corporate law, in a manner that does not violate any law, government or court-imposed order or restriction or agreement or instrument then binding on the Company or otherwise impair the legal or binding nature of the obligations represented by the applicable Securities; (ii) at the time of offer, issuance and sale of any Securities, the Registration Statement will have been declared effective under the Securities Act of 1933, as amended (the “**Act**”), and no stop order suspending its effectiveness will have been issued and remain in effect; (iii) any Preferred Stock Warrants will be issued under one or more equity warrant agreements, each to be between the Company and a financial institution identified therein as a warrant agent; (iv) any Common Stock Warrants will be issued under one or more equity warrant agreements, each to be between the Company and a financial institution identified therein as a warrant agent; (v) prior to any issuance of Preferred Shares, appropriate certificates of designation will be accepted for record by the Secretary of State of the State of Delaware; (vi) any Units will be issued under one or more unit agreements, each to be between the Company and a financial institution identified therein as unit agent; (vii) if being sold by the issuer thereof, the Securities will be delivered against payment of valid consideration therefor and in accordance with the terms of the applicable Board Action authorizing such sale and any applicable underwriting agreement or purchase agreement and as contemplated by the Registration Statement and/or the applicable prospectus supplement; and (viii) the Company will remain a Delaware corporation.

To the extent that the obligations of the Company with respect to the Securities may be dependent upon such matters, we assume for purposes of this opinion that the other party under any warrant agreement for any Preferred Stock Warrants or Common Stock Warrants, and under any unit agreement for any Units, namely, the warrant agent or the unit agent, respectively, is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization; that such other party is duly qualified to engage in the activities contemplated by such warrant agreement or unit agreement, as applicable; that such warrant agreement or unit agreement, as applicable, has been duly authorized, executed and delivered by the other party and constitutes the legal, valid and binding obligation of the other party enforceable against the other party in accordance with its terms; that such other party is in compliance with respect to performance of its obligations under such warrant agreement or unit agreement, as applicable, with all applicable laws and regulations; and that such other party has the requisite organizational and legal power and authority to perform its obligations under such warrant agreement or unit agreement, as applicable.

This opinion letter is based as to matters of law solely on the applicable provisions of the following, as currently in effect: (i) as to the opinions given in paragraphs (a), (b) and (e), the Delaware General Corporation Law, as amended, and (ii) as to the opinions given in paragraphs (c) and (d), the laws of the State of New York (but not including any laws, statutes, ordinances, administrative decisions, rules or regulations of any political subdivision below the state level). We express no opinion herein as to any other laws, statutes, ordinances, rules or regulations (and in particular, we express no opinion as to any effect that such other laws, statutes, ordinances, rules or regulations may have on the opinions expressed herein).

Based upon, subject to and limited by the foregoing, we are of the opinion that:

(a) The Preferred Shares (including any Preferred Shares duly issued upon the exercise of Preferred Stock Warrants and receipt by the Company of any additional consideration payable upon such exercise), upon due execution and delivery on behalf of the Company of certificates therefor, including global certificates, or the entry of the issuance thereof in the books and records of the Company, as the case may be, will be validly issued, fully paid and nonassessable.

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(b) The Common Shares (including any Common Shares duly issued upon the exchange or conversion of Preferred Shares that are exchangeable for or convertible into Common Shares or upon the exercise of Common Stock Warrants and receipt by the Company of any additional consideration payable upon such exchange, conversion or exercise), upon due execution and delivery on behalf of the Company of certificates therefor, including global certificates, or the entry of the issuance thereof in the books and records of the Company, as the case may be, will be validly issued, fully paid and nonassessable.

(c) The Preferred Stock Warrants, upon due execution and delivery of an equity warrant agreement relating thereto on behalf of the Company and the warrant agent named therein and due authentication of the Preferred Stock Warrants by such warrant agent, and upon due execution and delivery of the Preferred Stock Warrants on behalf of the Company, will constitute valid and binding obligations of the Company.

(d) The Common Stock Warrants, upon due execution and delivery of an equity warrant agreement relating thereto on behalf of the Company and the warrant agent named therein and due authentication of the Common Stock Warrants by such warrant agent, and upon due execution and delivery of the Common Stock Warrants on behalf of the Company, will constitute valid and binding obligations of the Company.

(e) The Units, upon due execution and delivery of a unit agreement relating thereto on behalf of the Company and the unit agent named therein and due authentication of the Units by such unit agent, and upon due execution and delivery on behalf of the Company of the underlying Securities that are components of the Units in accordance with the applicable unit agreement, certificate of designations (in the case of underlying Preferred Shares) or warrant agreement (in the case of underlying Preferred Stock Warrants or Common Stock Warrants), will be validly issued, fully paid and nonassessable.

The opinions expressed in paragraphs (c) and (d) above with respect to the valid and binding nature of obligations may be limited by bankruptcy, insolvency, reorganization, receivership, moratorium or other laws affecting creditors' rights (including, without limitation, the effect of statutory and other law regarding fraudulent conveyances, fraudulent transfers and preferential transfers) and by the exercise of judicial discretion and the application of principles of equity, good faith, fair dealing, reasonableness, conscionability and materiality (regardless of whether the Securities are considered in a proceeding in equity or at law).

This opinion letter has been prepared for use in connection with the Registration Statement. We assume no obligation to advise you of any changes in the foregoing subsequent to the effective date of the Registration Statement.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption "Legal Matters" in the prospectus constituting a part of the Registration Statement. In giving this consent, we do not thereby admit that we are an "expert" within the meaning of the Act.

Very truly yours,

/s/ HOGAN LOVELLS US LLP

HOGAN LOVELLS US LLP

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**Statement Regarding the Computation of Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends**

Our earnings are inadequate to cover fixed charges. The following table sets forth the dollar amount of the coverage deficiency (in thousands) for the periods indicated.

	<u>Year Ended December 31,</u>					<u>Three Months Ended March 31, 2014</u>
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	
EARNINGS:						
Net loss	\$ (2,903)	\$ (14,022)	\$ (11,345)	\$ (6,227)	\$ (9,499)	\$ (14,600)
Plus fixed charges	<u>64</u>	<u>56</u>	<u>58</u>	<u>58</u>	<u>61</u>	<u>16</u>
Total loss to cover fixed charges	(2,839)	(13,966)	(11,287)	(6,169)	(9,438)	(14,584)
FIXED CHARGES:						
Interest portion of rental expense (see below)	<u>64</u>	<u>56</u>	<u>58</u>	<u>58</u>	<u>61</u>	<u>16</u>
DEFICIENCY OF EARNINGS TO COVER FIXED CHARGES	<u>\$ (2,903)</u>	<u>\$ (14,022)</u>	<u>\$ (11,345)</u>	<u>\$ (6,227)</u>	<u>\$ (9,499)</u>	<u>\$ (14,600)</u>

The estimate of the interest portion of rental expense is calculated as one-third of total rental expense for the period.

**Consent of Independent Registered Public Accounting Firm**

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated March 21, 2014, relating to the financial statements of Rexahn Pharmaceuticals, Inc. appearing in the entity's Annual Report on Form 10-K for the year ended December 31, 2013.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ ParenteBeard LLC

Reading, Pennsylvania  
May 23, 2014

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