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

**Amendment No. 1
to
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, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer (Do not check if a smaller reporting company)	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price per Unit	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee ⁽²⁾⁽³⁾
Common Stock, par value \$0.0001 per share	(3)(4)	(3)(4)	(2)(3)(4)	
Preferred Stock, par value \$0.0001 per share	(3)(4)	(3)(4)	(2)(3)(4)	
Warrants	(3)(4)	(3)(4)	(2)(3)(4)	
Units ⁽¹⁾	(3)(4)	(3)(4)	(2)(3)(4)	
Common Stock, par value \$0.0001 per share, underlying common stock purchase warrants	5,285,132 ⁽⁵⁾⁽⁶⁾			
Total			\$ 177,093,396.75	\$ 17,385⁽⁷⁾

(1) Will represent an interest in any combination of common stock, preferred stock or warrants, which may or may not be separable from one another.

(2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) of the Securities Act.

(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) 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”).

(5) The common stock registered hereunder consists of unsold shares of common stock issuable upon the exercise of certain of the Company’s outstanding warrants, as more fully described herein.

(6) The number of shares has been adjusted to reflect a one-for-ten reverse split of the Company’s common stock effective May 5, 2017.

(7) A fee of \$17,385 was previously paid on the original filing of this registration statement. The securities registered hereunder include unsold securities previously registered pursuant to the Registration Statement No. 333-196255, which was declared effective on June 26, 2014 (the “2014 Registration Statement”). The 2014 Registration Statement expires on June 26, 2017, pursuant to Rule 415(a)(5) under the Securities Act. Pursuant to Rule 415(a)(6) under the Securities Act, the filing fees previously paid for the 2014 Registration Statement for \$27,093,396.75 of the securities being registered hereunder will continue to be applied to such securities

and no additional fee is required to be paid for the current registration statement for such securities.

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.

EXPLANATORY NOTE

This registration statement includes two prospectuses:

- a base prospectus that covers the offering, issuance and sale by the registrant of up to \$150,000,000 of the registrant's common stock, preferred stock, units and warrants; and
- a prospectus covering up to 5,285,132 shares of the registrant's common stock issuable upon the exercise of previously issued warrants of the registrant outstanding on June 23, 2017.

The base prospectus immediately follows this explanatory note. The specific terms of any securities to be offered pursuant to the base prospectus will be specified in a prospectus supplement to the base prospectus. The additional prospectus immediately and sequentially follows the base prospectus. The common stock that may be offered, issued, and sold under the additional prospectus is not included in the \$150,000,000 of securities that may be offered, issued, and sold by the registrant under the base prospectus.

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 June 23, 2017.

PROSPECTUS



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

We may offer and sell from time to time our 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 under the symbol "RNN." On June 19, 2017, the last reported sale price of our common stock on the NYSE MKT was \$3.05 per share. 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. See "Plan of Distribution" on page 2 for more information.

Investing in our securities involves risks. Please see "Risk Factors" on page 1 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 , 2017

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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,” “registrant,” “we,” “us,” “our” and similar terms refer to Rexahn Pharmaceuticals, Inc.

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 our most recent Annual Report on Form 10-K, as updated by the additional risks and uncertainties set forth in other filings we make with the SEC and any accompanying prospectus supplement, before deciding whether to buy our securities. Any of the risks and uncertainties set forth in those filings 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” below.

THE COMPANY

We are a clinical stage biopharmaceutical company dedicated to the discovery, development and commercialization of innovative treatments for cancer. Our mission is to improve the lives of cancer patients by developing next-generation cancer therapies that are designed to maximize efficacy while minimizing the toxicity and side effects traditionally associated with cancer treatment. Our clinical pipeline features three oncology product candidates in Phase II clinical development and additional compounds in pre-clinical development. Our strategy is to continue building a significant pipeline of innovative oncology product candidates that we intend to commercialize with partners. Our three clinical stage drug candidates in active development are RX-3117, SupinoxinTM (RX-5902) and Archexin[®].

We trace our history to the March 2001 founding of Rexahn, Corp, which in 2005 merged with and into Rexahn Pharmaceuticals, Inc. (formerly Corporate Road Show.com Inc.). Our principal executive offices are located at 15245 Shady Grove Road, Suite 455, Rockville, Maryland 20850, and our telephone number is (240) 268-5300. Our website is <http://www.rexahn.com>. We make our electronic filings with the SEC, including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports available on our website free of charge as soon as practicable after we file them with or furnish them to the SEC. Information on the website is not part of, or incorporated by reference into, this prospectus.

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 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 ability to initially develop drug candidates for orphan indications to reduce the time-to-market and take advantage of certain incentives provided by the U.S. Food and Drug Administration;
- our ability to transition from our initial focus on developing drug candidates for orphan indications to candidates for more highly prevalent indications;
- our ability 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 ability 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;

- 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; and
- our lack of profitability and the need for additional capital to operate our business.

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.

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 50,000,000 shares of our common stock, par value \$0.0001 per share. As of June 19, 2017, there were 28,452,305 shares of common stock issued and outstanding, and there were outstanding warrants to purchase up to an additional 5,288,466 shares of our common stock, options to purchase 1,937,871 shares of our common stock and restricted stock units to acquire 54,300 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 Co., Inc.

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 10,000,000 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 June 19, 2017, we had outstanding warrants to purchase up to 5,288,466 shares of common stock, having exercise prices ranging from \$3.00 to \$12.80 and expiration dates from December 4, 2017 to December 12, 2022. 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, 2017.

	For the Three Months Ended March 31, 2017	For the Year Ended December 31,				
		2016	2015	2014	2013	2012
Ratio of earnings to combined fixed charges and preferred stock dividends	Deficiency	Deficiency	Deficiency	Deficiency	Deficiency	Deficiency
Deficiency (in thousands)	\$ (21,611)	\$ (9,307)	\$ (14,385)	\$ (18,522)	\$ (9,499)	\$ (6,227)

For the three months ended March 31, 2017 and the years ended December 31, 2016, 2015, 2014, 2013 and 2012, 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 (other than, in each case, documents or information deemed to have been “furnished” and not “filed” in accordance with SEC rules). These documents contain important information about us.

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 (File No. 001-34079);
- our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017 (File No. 001-34079);
- our Current Reports on Form 8-K filed on April 13, 2017, May 5, 2017, June 7, 2017 and June 12, 2017 (File No. 001-34079); and
- the description of our Common Stock contained in our Form 8-A (File No. 001-34079), as filed with the SEC pursuant to Sections 12(b) and 12(g) of the Exchange Act on May 23, 2008.

In addition, all documents that we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement of which this prospectus is a part and all such documents that we file with the SEC after the date of this prospectus and before the termination of the offering of our securities shall be deemed incorporated by reference into this prospectus and to be a part of this prospectus from the respective dates of filing such documents. Unless specifically stated to the contrary, none of the information that we disclose under Items 2.02 or 7.01 of any Current Report on Form 8-K that we may from time to time furnish to the SEC will be incorporated by reference into, or otherwise included in, this prospectus.

Any statement contained in a document incorporated by reference in this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document that also is or is deemed to be incorporated by reference in this prospectus modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

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 website <http://www.rexahn.com> or by requesting them in writing or by telephone at:

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, or incorporated by reference into, 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 of the Company appearing in our Annual Report on Form 10-K for the year ended December 31, 2016, and the effectiveness of our internal control over financial reporting as of December 31, 2016, have been audited by Baker Tilly Virchow Krause, LLP, an independent registered public accounting firm, as set forth in their reports thereon, included therein, and incorporated herein by reference. Such financial statements are incorporated herein by reference in reliance upon such reports given on the authority of Baker Tilly Virchow Krause, LLP as experts in accounting and auditing.



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

PROSPECTUS

June 23, 2017

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 June 23, 2017.

PROSPECTUS



**5,285,132 SHARES OF OUR COMMON STOCK
UNDERLYING WARRANTS PREVIOUSLY ISSUED**

Pursuant to this prospectus, we are registering 5,285,132 shares of our common stock, par value \$0.0001 per share, issuable upon the exercise of outstanding warrants. The warrants were originally issued by us as follows: (a) warrants to purchase 17,430 shares of common stock were issued on December 4, 2012, with an exercise price of \$4.72 per share, subject to adjustment, (b) warrants to purchase 200,000 shares of common stock were issued on July 26, 2013, with an exercise price of \$5.90 per share, subject to adjustment, (c) warrants to purchase 231,732 shares of common stock were issued on October 16, 2013, with an exercise price of \$5.75 per share, subject to adjustment, (d) warrants to purchase 476,193 shares of common stock were issued on January 21, 2014, with an exercise price of \$12.80 per share, subject to adjustment, (e) warrants to purchase 1,250,001 shares of common stock were issued on November 11, 2015, with an exercise price of \$5.30 per share, subject to adjustment, (f) warrants to purchase 607,806 shares of common stock were issued on March 2, 2016, with an exercise price of \$4.20 per share, subject to adjustment, (g) warrants to purchase 805,000 shares of common stock were issued on September 2016, with an exercise price of \$3.00 per share, subject to adjustment, (h) warrants to purchase 1,515,152 shares of common stock were issued on June 12, 2017, with an exercise price of \$4.00 per share, subject to adjustment, and (i) warrants to purchase 181,818 shares of common stock were issued on June 12, 2017, with an exercise price of \$4.125 per share (collectively, the "Warrants"). The Warrants expire between five and five and one half years after their respective issuance.

Our common stock is listed on the NYSE MKT under the symbol "RNN." On June 19, 2017, the last reported sale price of our common stock on the NYSE MKT was \$3.05 per share.

Investing in our securities involves risks. Please see "Risk Factors" on page 1 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 , 2017

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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. This prospectus relates to the issuance by us of up to 5,285,132 shares of our common stock issuable upon the exercise of previously issued warrants. The warrants and shares of common stock issuable upon exercise of the warrants were initially registered under a “shelf” Registration Statement on Form S-3. We are filing this prospectus under the current Registration Statement for the sole purpose of ensuring that an effective Registration Statement covers the exercise of such previously issued warrants.

The common stock is sometimes referred to in this prospectus as the “securities.” This prospectus provides you with a general description of the securities we may offer. If there is any inconsistency between the information in this prospectus and any prospectus supplement relating to the securities, 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.

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 our most recent Annual Report on Form 10-K, as updated by the additional risks and uncertainties set forth in other filings we make with the SEC and any accompanying prospectus supplement, before deciding whether to buy our securities. Any of the risks and uncertainties set forth in those filings 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” below.

THE COMPANY

We are a clinical stage biopharmaceutical company dedicated to the discovery, development and commercialization of innovative treatments for cancer. Our mission is to improve the lives of cancer patients by developing next-generation cancer therapies that are designed to maximize efficacy while minimizing the toxicity and side effects traditionally associated with cancer treatment. Our clinical pipeline features three oncology product candidates in Phase II clinical development and additional compounds in pre-clinical development. Our strategy is to continue building a significant pipeline of innovative oncology product candidates that we intend to commercialize with partners. Our three clinical stage drug candidates in active development are RX-3117, SupinoxinTM (RX-5902) and Archexin[®].

We trace our history to the March 2001 founding of Rexahn, Corp, which in 2005 merged with and into Rexahn Pharmaceuticals, Inc. (formerly Corporate Road Show.com Inc.). Our principal executive offices are located at 15245 Shady Grove Road, Suite 455, Rockville, Maryland 20850, and our telephone number is (240) 268-5300. Our website is <http://www.rexahn.com>. We make our electronic filings with the SEC, including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports available on our website free of charge as soon as practicable after we file them with or furnish them to the SEC. Information on the website is not part of, or incorporated by reference into, this prospectus.

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 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 ability to initially develop drug candidates for orphan indications to reduce the time-to-market and take advantage of certain incentives provided by the U.S. Food and Drug Administration;
- our ability to transition from our initial focus on developing drug candidates for orphan indications to candidates for more highly prevalent indications;
- our ability 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 ability 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;

- 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; and
- our lack of profitability and the need for additional capital to operate our business.

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

The securities being offered by this prospectus will be issued and sold upon the exercise of the Warrants. Shares of common stock issuable upon exercise of the outstanding Warrants will trade on the NYSE MKT under the symbol “RNN.” The common stock will be distributed to Warrant holders who exercise the Warrants and deliver payment of the purchase price, in accordance with the terms of the Warrants.

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 50,000,000 shares of our common stock, par value \$0.0001 per share. As of June 19, 2017, there were 28,452,305 shares of common stock issued and outstanding, and there were outstanding warrants to purchase up to an additional 5,288,466 shares of our common stock, options to purchase 1,937,871 shares of our common stock and restricted stock units to acquire 54,300 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 Co., Inc.

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 OUTSTANDING WARRANTS

In December 2012, we issued warrants to purchase up to an aggregate of 1,210,000 shares of common stock at an exercise price of \$4.72 per share (the "December 2012 Warrants").

In July 2013, we issued warrants to purchase up to an aggregate of 399,000 shares of common stock at an exercise price of \$5.90 per share (the "July 2013 Warrants").

In October 2013, we issued warrants to purchase up to an aggregate of 356,731 shares of common stock at an exercise price of \$5.75 per share (the "October 2013 Warrants").

In January 2014, we issued warrants to purchase up to an aggregate of 476,193 shares of common stock at an exercise price of \$12.80 per share (the "January 2014 Warrants").

In November 2015, we issued warrants to purchase up to an aggregate of 1,250,001 shares of common stock at an exercise price of \$5.30 per share (the “November 2015 Warrants”).

In March 2016, we issued warrants to purchase up to an aggregate of 1,171,875 shares of common stock at an exercise price of \$4.20 per share (the “March 2016 Warrants”).

In September 2016, we issued warrants to purchase up to an aggregate of 1,800,000 shares of common stock at an exercise price of \$3.00 per share (the “September 2016 Warrants”).

In June 2017, we issued warrants to purchase up to an aggregate of 1,515,512 shares of common stock at an exercise price of \$4.00 per share (the “June 2017 Investor Warrants”) and warrants to purchase up to an aggregate of 181,818 shares of common stock at an exercise price of \$4.125 per share (the “June 2017 Placement Agent Warrants”).

The exercise price and number of shares of common stock issuable upon exercise of each of the December 2012 Warrants, July 2013 Warrants, October 2013 Warrants, January 2014 Warrants, November 2015 Warrants, March 2016 Warrants and September 2016 Warrants has been adjusted to reflect a one-for-ten reverse split of the Company’s common stock effective May 5, 2017.

All of the Warrants were issued and initially registered pursuant to a Registration Statement on Form S-3.

As of the date of this prospectus, the following number of each series of Warrants remains unexercised and outstanding:

December 2012 Warrants	17,430
July 2013 Warrants	200,000
October 2013 Warrants	231,732
January 2014 Warrants	476,193
November 2015 Warrants	1,250,001
March 2016 Warrants	607,806
September 2016 Warrants	805,000
June 2017 Investor Warrants	1,515,152
June 2017 Placement Agent Warrants	181,818
Total	5,285,132

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 (other than, in each case, documents or information deemed to have been “furnished” and not “filed” in accordance with SEC rules). These documents contain important information about us.

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 (File No. 001-34079);
- our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017 (File No. 001-34079);

- our Current Reports on Form 8-K filed on April 13, 2017, May 5, 2017, June 7, 2017 and June 12, 2017 (File No. 001-34079); and
- the description of our Common Stock contained in our Form 8-A (File No. 001-34079), as filed with the SEC pursuant to Sections 12(b) and 12(g) of the Exchange Act on May 23, 2008.

In addition, all documents that we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement of which this prospectus is a part and all such documents that we file with the SEC after the date of this prospectus and before the termination of the offering of our securities shall be deemed incorporated by reference into this prospectus and to be a part of this prospectus from the respective dates of filing such documents. Unless specifically stated to the contrary, none of the information that we disclose under Items 2.02 or 7.01 of any Current Report on Form 8-K that we may from time to time furnish to the SEC will be incorporated by reference into, or otherwise included in, this prospectus.

Any statement contained in a document incorporated by reference in this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document that also is or is deemed to be incorporated by reference in this prospectus modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

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 website <http://www.rexahn.com> or by requesting them in writing or by telephone at:

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, or incorporated by reference into, 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 of the Company appearing in our Annual Report on Form 10-K for the year ended December 31, 2016, and the effectiveness of our internal control over financial reporting as of December 31, 2016, have been audited by Baker Tilly Virchow Krause, LLP, an independent registered public accounting firm, as set forth in their reports thereon, included therein, and incorporated herein by reference. Such financial statements are incorporated herein by reference in reliance upon such reports given on the authority of Baker Tilly Virchow Krause, LLP as experts in accounting and auditing.



**5,285,132 SHARES OF OUR COMMON STOCK
UNDERLYING WARRANTS PREVIOUSLY ISSUED**

PROSPECTUS

June 23, 2017

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

SEC registration fee	\$ 17,385
Accounting fees and expenses	7,000 *
Printing fees and expenses	1,000 *
Legal fees and expenses	40,000 *
Miscellaneous expenses	5,000 *
Total	\$ 70,385 *

* 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.

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;

(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 SEC 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) 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 SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act 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 part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(5) That, for the purpose of determining liability under the Securities Act 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 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.

(6) That, for the purpose of determining liability of the registrant under the Securities Act 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, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) 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 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 SEC 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 June 23, 2017.

REXAHN PHARMACEUTICALS, INC.

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

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated and on June 23, 2017.

<u>Name</u>	<u>Title</u>
<u>/s/ Peter D. Suzdak</u> Peter D. Suzdak	Chief Executive Officer and Director (Principal Executive Officer)
<u>/s/ Tae Heum Jeong</u> Tae Heum Jeong	Chief Financial Officer and Secretary (Principal Financial Officer and Principal Accounting Officer)
<u>*</u> Peter Brandt	Chairman
<u>*</u> Chang H. Ahn	Director
<u>*</u> Charles Beever	Director
<u>*</u> Mark Carthy	Director
<u>*</u> Kwang Soo Cheong	Director
<u>*</u> Richard J. Rodgers	Director

* By: /s/ Tae Heum Jeong
Tae Heum Jeong
Attorney-in-Fact

INDEX TO EXHIBITS

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

Exhibit Number	Description
1.1*	Form of Underwriting Agreement.
3.1	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).
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K (File No. 001-34079) filed on May 5, 2017).
3.3	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).
4.1	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).
4.2*	Certificate of Designations of Preferred Stock.
4.3*	Form of Preferred Stock Certificate.
4.4*	Form of Warrant.
4.5*	Form of Warrant Agreement.
4.6*	Form of Unit.
4.7*	Form of Unit Agreement.
5.1	Opinion of Hogan Lovells US LLP.
12.1	Statement Regarding the Computation of Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends (previously filed on May 26, 2017).
23.1	Consent of Baker Tilly Virchow Krause, LLP.
23.2	Consent of Hogan Lovells US LLP (included in Exhibit 5.1).
24.1	Power of Attorney (previously filed on May 26, 2017).

* 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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100 International Drive
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Baltimore, MD 21202
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www.hoganlovells.com

June 23, 2017

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 proposed public offering of up to \$150,000,000 in aggregate amount of one or more series of the following securities of the Company: (i) shares of preferred stock, \$0.0001 par value per share (the “**Preferred Shares**”), (ii) shares of common stock, \$0.0001 par value 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**”), 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. The Registration Statement also relates to the offering of up to 5,285,132 Common Shares (the “**Warrant Shares**” and, together with the Preferred Shares, the Common Shares, the Preferred Stock Warrants, the Common Stock Warrants and the Units, the “**Securities**”) issuable upon exercise of warrants previously offered and sold by the Company (the “**Outstanding Warrants**”). 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 pdfs). 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 Mexico City Miami Milan Minneapolis Monterrey Moscow Munich New York Northern Virginia Paris Perth Philadelphia Rio de Janeiro Rome San Francisco São Paulo Shanghai Silicon Valley Singapore Sydney Tokyo Ulaanbaatar Warsaw Washington DC Associated offices: Budapest Jakarta Shanghai FTZ Zagreb. Business Service Centers: Johannesburg Louisville. Legal Service Center: Birmingham. For more information see www.hoganlovells.com

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, and will be governed by New York law; (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, and will be governed by New York law; (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, and will be governed by New York law; (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; (viii) the number of Preferred Shares and Common Shares issued under the Registration Statement or by conversion or exercise of any Securities will not exceed the number authorized under the Company's Certificate of Incorporation as then in effect and (ix) 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 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, rules 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) the Delaware General Corporation Law, as amended, and (ii) as to the opinions given in paragraphs (c), (d) and (e), 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 statutes, rules or regulations (and in particular, we express no opinion as to any effect that such other statutes, 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 that are duly issued as part of any Units or 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.

(b) The Common Shares (including any Common Shares duly issued as part of any Units or 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 conversion, exchange 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 issuance 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 constitute valid and binding obligations of the Company.

(f) Each of the Warrant Shares, upon due exercise of the applicable Outstanding Warrants and receipt by the Company of the exercise price payable upon such exercise as specified in the applicable Outstanding Warrants, and 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.

The opinions expressed in Paragraphs (c), (d) and (e) 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 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

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in these Prospectuses constituting a part of this Registration Statement of our reports dated February 24, 2017, relating to the financial statements and the effectiveness of Rexahn Pharmaceuticals, Inc.'s internal control over financial reporting appearing in the entity's Annual Report on Form 10-K for the year ended December 31, 2016.

We also consent to the references to us under the captions "Experts" in these Prospectuses.

/s/ Baker Tilly Virchow Krause, LLP

Wyomissing, Pennsylvania

June 23, 2017
