REXAHN PHARMACEUTICALS, INC.
Form 424B5
March 16, 2015

Filed Pursuant to Rule 424(b)(5)
Registration No. 333-196255

Prospectus Supplement
(to Prospectus dated June 26, 2014)

$40,000,000
COMMON STOCK

We have entered into an At Market Issuance Sales Agreement, or sales agreement, with MLV & Co. LLC, or MLV, relating to the sale of shares of our common stock offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the sales agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to $40 million from time to time through MLV acting as sales agent.

Our common stock is listed on the NYSE MKT under the symbol “RNN.” On March 13, 2015, the last reported sale price of our common stock on the NYSE MKT was $0.73 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made in sales deemed to be “at the market offerings” as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, or the Securities Act, including sales made directly on or through the NYSE MKT, the existing trading market for our common stock, sales made to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or any other method permitted by law. MLV will act as a sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between MLV and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to MLV for sales of common stock sold pursuant to the sales agreement will be 3.0% of the gross proceeds from each such sale. In connection with the sale of the common stock on our behalf, MLV may be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation of MLV may be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to MLV with respect to certain liabilities, including liabilities under the Securities Act.

Investing in our securities involves significant risks. Please read the information contained in or incorporated by reference under the heading “Risk Factors” beginning on page S-4 of this prospectus supplement, and under similar headings in other documents filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.

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 supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is March 16, 2015

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus relate to the offering of our common stock. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we may authorize for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus supplement entitled “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.” These documents contain important information that you should consider when making your investment decision.

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of the offering of the common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus, including the documents incorporated by reference into the accompanying prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to the combined document consisting of this prospectus supplement and the accompanying prospectus. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference into the accompanying prospectus that was filed with the Securities and Exchange Commission, or SEC, before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date, the statement in the document having the later date modifies or supersedes the earlier statement.

We are responsible for the information contained in, or incorporated by reference into, this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we may authorize for use in connection with this offering. We have not, and MLV has not, authorized any other person to provide you with different information, and neither we nor MLV take any responsibility for any other information that others may give you.

We are not, and MLV is not, making an offer to sell or soliciting an offer to buy our common stock in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we may authorize for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

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.

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SUMMARY

This summary highlights information contained elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary does not contain all of the information that you should consider before deciding to invest in our common stock. You should read this entire prospectus supplement and the accompanying prospectus carefully, including the "Risk Factors" section contained in this prospectus supplement, our financial statements and the related notes thereto and the other documents incorporated by reference in this prospectus supplement and the accompanying prospectus.

Overview

We are a clinical stage biopharmaceutical company dedicated to the discovery, development and commercialization of innovative treatments for cancer and other medical needs. Our mission is to discover and develop new medicines for diseases that plague patients and have no effective cures, in particular high-mortality cancers. Our pipeline features one oncology candidate in Phase II clinical trials, two oncology candidates in Phase I clinical trials, other candidates in preclinical development, and two drug candidates that are not being actively developed. Our strategy is to continue building a significant product pipeline of innovative drug candidates that we will commercialize alone or with partners. We intend to initially develop drug candidates for cancers that are orphan indications and then expand into more highly prevalent cancers.

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

- Archexin is a potential best-in-class, potent inhibitor of the protein kinase Akt-1, which we believe plays critical roles in cancer cell proliferation, survival, angiogenesis, metastasis and drug resistance. Archexin has received “orphan drug” designation from the U.S. Food and Drug Administration, or the FDA, for renal cell carcinoma, or RCC, glioblastoma, ovarian cancer, stomach cancer and pancreatic cancer. We have completed a Phase IIa clinical trial for Archexin for the treatment of pancreatic cancer, and in January 2014, we initiated a Phase IIa proof-of-concept clinical trial to study Archexin’s safety and efficacy in patients with metastatic RCC.

- RX-3117 is a small molecule nucleoside compound with an anti-metabolite mechanism of action, and we believe it has therapeutic potential in a broad range of cancers, including colon, lung and pancreatic cancer. We completed an exploratory Phase I clinical study for RX-3117 in 2012 that demonstrated the oral bioavailability of RX-3117 in humans with no adverse effects reported. In January 2014, we initiated a Phase Ib clinical trial to study the safety and efficacy of RX-3117 in patients with solid tumors. RX-3117 has received orphan drug designation from the FDA for pancreatic cancer.

- Supinoxin, or RX-5902, is a potential first-in-class small molecule that inhibits the phosphorylation of p68, a protein that we believe plays a key role in cancer growth, progression and metastasis. In July 2012, we submitted an Investigational New Drug application to the FDA for Supinoxin. We initiated a Phase I clinical in August 2013 to study Supinoxin’s safety and efficacy in patients with solid tumors.

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We also have two drug candidates in pre-clinical development: Archexin-Nano, which may provide significant clinical benefits including targeted higher cellular intake, extended circulation time, reduced drug toxicity, and improved efficacy; and RX-21101, an (N-(2-Hydroxypropyl)methacrylamide-docetaxel-folate, which may bolster efficacy against tumors while lowering toxicity by specific tumor targeting and increased stability in the body.

In addition to our drug development, we are also working on proprietary research technologies, including our multi-target aimed ligands platform and nano-based drug delivery systems.

Company Information

We trace our history as a biopharmaceutical company focusing on oncology drugs to March 2001. Our principal corporate office is located at 15245 Shady Grove Road, Suite 455, Rockville, Maryland 20850. Our telephone number is (240) 268-5300. Our website is http://www.rexahn.com. Information found on or accessible through our website is not incorporated into this prospectus supplement or the accompanying prospectus and does not constitute part of this prospectus supplement or the accompanying prospectus.

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THE OFFERING

Common Stock Offered	Shares of our common stock having an aggregate offering price of up to $40 million.
Manner of Offering	“At the market” offering that may be made from time to time through our sales agent, MLV & Co. LLC, or MLV. See “Plan of Distribution” on page S-11 of this prospectus supplement for a more complete description of the manner of offering.
Use of Proceeds	We expect to use the net proceeds of this offering, if any, for working capital and general corporate purposes, including research and development, expenses and general and administrative expenses. See “Use of Proceeds” on page S 8 of this prospectus supplement for a more complete description of the intended use of proceeds from this offering.
Risk Factors	Investing in our securities involves significant risks. Please read the information contained in or incorporated by reference under the heading “Risk Factors” beginning on page S-4 of this prospectus supplement, and under similar headings in other documents filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.
NYSE MKT Symbol	RNN

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RISK FACTORS

Investment in our common stock involves risks. Before deciding whether to invest in our common stock, you should consider carefully the risk factors discussed below and those contained in the section entitled "Risk Factors" contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2014, as filed with the SEC, on March 16, 2015, which is incorporated herein by reference in its entirety, together with other information in this prospectus supplement, and the accompanying prospectus, and the information and documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section below entitled "Cautionary Note Regarding Forward-Looking Statements."

Risks Related to this Offering

Sales of our common stock in this offering, or the perception that such sales may occur, could cause the market price of our common stock to fall.

We may issue and sell shares of our common stock for aggregate gross proceeds of up to $40 million from time to time in connection with this offering. The issuance and sale from time to time of these new shares of common stock, or our ability to issue these new shares of common stock in this offering could have the effect of depressing the market price of our common stock.

Our management will have broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds, and the proceeds may not be invested successfully.

Our management will have broad discretion as to the use of the net proceeds from any offering by us and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for Rexahn.

You may experience immediate and substantial dilution in the book value per share of the common stock you purchase in the offering.

The offering price per share in this offering may exceed the pro forma net tangible book value per share of our common stock outstanding prior to this offering. Assuming that an aggregate of 54,794,521 shares of our common stock are sold at a price of $0.73 per share, the last reported sale price of our common stock on the NYSE MKT on March 13, 2015 for aggregate gross proceeds of approximately $40 million, and after deducting commissions and estimated aggregate offering expenses payable by us, you will experience immediate dilution of $0.45 per share, representing the difference between our pro forma as adjusted net tangible book value per share as of December 31, 2014 after giving effect to this offering and the assumed offering price. The exercise of outstanding stock options will result in further dilution of your investment. See the section below entitled "Dilution" for a more detailed illustration of the dilution you would incur if you participate in this offering.

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We will require additional capital funding, the receipt of which may impair the value of our common stock.

Our future capital requirements depend on many factors, including our research, development, sales and marketing activities. We will need to raise additional capital through public or private equity or debt offerings or through arrangements with strategic partners or other sources in order to continue to develop our drug candidates. There can be no assurance that additional capital will be available when needed or on terms satisfactory to us, if at all. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution and the new equity securities may have greater rights, preferences or privileges than our existing common stock.

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Special Note Regarding Forward Looking Statements

This prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering contain statements (including certain projections and business trends) accompanied by such phrases as "believe," "estimate," "expect," "anticipate," "will," "intend" and other similar expressions, that are "forward-looking statemer defined in the Private Securities Litigation Reform Act of 1995. We caution that forward-looking statements are based largely on our expectations and are subject to a number of known and unknown risks and uncertainties that are subject to change based on factors which are, in many instances, beyond our control. Actual results, performance or achievements may differ materially from those contemplated, expressed or implied by the forward-looking statements.

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;

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- 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;
- our lack of profitability and the need for additional capital to operate our business;
- the use of proceeds from this offering; and
- other risks and uncertainties, including those set forth herein under the caption “Risk Factors” and those detailed from time to time in our filings with the SEC.

These forward-looking statements are made only as of the date of the document containing the applicable statement, and we undertake no obligation to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise.

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USE OF PROCEEDS

We intend to use the net proceeds from this offering for working capital and general corporate purposes, including without limitation development of our product candidates and general and administrative expenses. The amounts and timing of our use of the net proceeds from the sale of securities in this offering will depend on a number of factors, such as the timing and progress of trials of our clinical and pre-clinical product candidates and our development efforts, the timing and progress of any partnering efforts, technological advances and the competitive environment for our product candidates.

As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Accordingly, our management will have broad discretion in the timing and application of these proceeds. Pending application of the net proceeds as described above, we intend to invest the net proceeds of this offering in a variety of capital preservation investments, including but not limited to short-term, interest-bearing investment grade securities, money market accounts, certificates of deposit and direct or guaranteed obligations of the U.S. government.

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DILUTION

If you invest in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share and the as adjusted net tangible book value per share after giving effect to this offering. We calculate net tangible book value per share by dividing the net tangible book value, which is tangible assets less total liabilities, by the number of outstanding shares of our common stock. Dilution represents the difference between the portion of the amount per share paid by purchasers of shares in this offering and the as adjusted net tangible book value per share of our common stock immediately after giving effect to this offering. Our net tangible book value as of December 31, 2014 was approximately $26.6 million, or $0.15 per share.

After giving effect to the sale of our common stock pursuant to this prospectus supplement and accompanying prospectus in the aggregate amount of $40 million at an assumed offering price of $0.73 per share, the last reported sale price of our common stock on the NYSE MKT on March 13, 2015, and after deducting commissions and estimated aggregate offering expenses payable by us, our net tangible book value as of December 31, 2014 would have been $65.2 million, or $0.28 per share of common stock. This represents an immediate increase in the net tangible book value of $0.13 per share to our existing stockholders and an immediate dilution in net tangible book value of $0.45 per share to new investors. The following table illustrates this per share dilution:

Assumed offering price per share		$0.73
Net tangible book value per share as of December 31, 2014	$0.15	
Increase per share attributable to new investors	$0.13	
As adjusted net tangible book value per share as of December 31, 2014, after giving effect to this offering		$0.28
Dilution per share to new investors purchasing shares in this offering		$0.45

The table above assumes for illustrative purposes that an aggregate of 54,794,521 shares of our common stock are sold pursuant to this prospectus supplement and the accompanying prospectus at a price of $0.73 per share, the last reported sale price of our common stock on the NYSE MKT on March 13, 2015, for aggregate gross proceeds of $40 million. The shares sold in this offering, if any, will be sold from time to time at various prices. An increase of $0.10 per share in the price at which the shares are sold from the assumed offering price of $0.73 per share shown in the table above, assuming all of our common stock in the aggregate amount of $40 million is sold at that price, would result in an adjusted net tangible book value per share after the offering of $0.29 per share and would increase the dilution in net tangible book value per share to new investors in this offering to $0.54 per share, after deducting commissions and estimated aggregate offering expenses payable by us. A decrease of $0.10 per share in the price at which the shares are sold from the assumed offering price of $0.73 per share shown in the table above, assuming all of our common stock in the aggregate amount of $40 million is sold at that price, would result in an adjusted net tangible book value per share after the offering of $0.27 per share and would decrease the dilution in net tangible book value per share to new investors in this offering to $0.36 per share, after deducting commissions and estimated aggregate offering expenses payable by us.

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The foregoing table and discussion is based on 178,253,318 shares of common stock outstanding as of December 31, 2014 and excludes:

- 11,400,806 shares of our common stock subject to outstanding options having a weighted exercise price of $0.93 per share;
- 14,021,501 shares of our common stock reserved for future issuance pursuant to our existing stock option plan; and
- 13,205,871 shares of our common stock that have been reserved for issuance upon exercise of outstanding warrants having a weighted exercise price of $1.07 per share.

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PLAN OF DISTRIBUTION

We have entered into an At Market Issuance Sales Agreement, or sales agreement, with MLV & Co. LLC, or MLV, under which we may issue and sell shares of our common stock from time to time through MLV acting as agent, subject to certain limitations, including the number of shares registered under the registration statement to which the offering relates. Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made in sales deemed to be “at the market offerings” as defined in Rule 415 promulgated under the Securities Act, including sales made directly on or through NYSE MKT, the existing trading market for our common stock, sales made to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or any other method permitted by law. We may instruct MLV not to sell our common stock if the sales cannot be effected at or above the price designated by us from time to time. We or MLV may suspend the offering of our common stock upon notice and subject to other conditions. As an agent, MLV will not engage in any transactions that stabilize the price of our common stock.

Each time we wish to issue and sell common stock under the sales agreement, we will notify MLV of the number of shares to be issued, the dates on which such sales are anticipated to be made, any minimum price below which sales may not be made and other sales parameters as we deem appropriate. Once we have so instructed MLV, unless MLV declines to accept the terms of the notice, MLV has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of MLV under the sales agreement to sell our common stock are subject to a number of conditions that we must meet.

We will pay MLV commissions for its services in acting as agent in the sale of our common stock. MLV will be entitled to compensation at a commission rate equal to 3.0% of the gross sales price per share sold. Because there is no minimum offering amount required as a condition to closing this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. In addition, we have agreed to reimburse MLV for fees and disbursements related to its legal counsel in an amount not to exceed $25,000, and for certain other expenses.

We estimate that the total expenses for the offering, excluding compensation payable to MLV under the terms of the sales agreement, will be approximately $150,000.

Settlement for sales of our common stock will occur on the third business day following the date on which any sales are made, or on some other date that is agreed upon by us and MLV in connection with a particular transaction, in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sale of the common stock on our behalf, MLV may, and will with respect to sales effected in an "at the market offering," be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation of MLV may be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to MLV against certain civil liabilities, including liabilities under the Securities Act.

The offering pursuant to the sales agreement will terminate upon the earlier of (i) the issuance and sale of all shares of our common stock subject to the sales agreement, or (ii) the termination of the sales agreement as permitted therein.

MLV and its affiliates may in the future provide various investment banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, MLV will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus supplement.

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LEGAL MATTERS

The validity of the common stock offered hereby will be passed upon for us by Hogan Lovells US LLP, Baltimore, Maryland. LeClairRyan, A Professional Corporation, New York, New York, will act as counsel to MLV in connection with this offering.

EXPERTS

The financial statements of Rexahn Pharmaceuticals, Inc. appearing in our Annual Report on Form 10-K for the year ended December 31, 2014, and the effectiveness of our internal control over financial reporting as of December 31, 2014 have been audited by Baker Tilly Virchow Krause, LLP, 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.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Exchange Act, and file annual, quarterly and current reports, proxy statements and other information with the SEC. This prospectus supplement and the accompanying prospectus are part of the registration statement on Form S-3 we filed with the SEC under the Securities Act and do not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus supplement or the accompanying prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference in this prospectus supplement and the accompanying prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at http://www.sec.gov. You may also read and copy any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

We maintain a website at http://www.rexahn.com. Information found on or accessible through our website is not incorporated into this prospectus supplement or the accompanying prospectus and does not constitute part of this prospectus supplement or the accompanying prospectus.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose important information to you by referring you to another document that we have filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus supplement. Information in this prospectus supplement supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus supplement, while information that we file later with the SEC will automatically update and supersede the information in this prospectus supplement and the accompanying prospectus. We incorporate by reference into this prospectus supplement and the accompanying prospectus the information or documents listed below that we have filed with the SEC (Commission File No. 001-34079):

- our Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 16, 2015; and

- the description of our common stock contained in our Registration Statement on Form 8-A filed under the Exchange Act on May 23, 2008, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement and prior to the termination of the offering of the common stock covered by this prospectus supplement and the accompanying prospectus. Information in such future filings updates and supplements the information provided in this prospectus supplement and the accompanying prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to:

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

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PROSPECTUS

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

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

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

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

Our common stock is listed on the NYSE MKT and traded under the symbol “RNN.” None of the other securities are currently publicly traded. We may sell these securities to or through underwriters and also to other purchasers or through agents. We will set forth the names of any underwriters or agents in an accompanying prospectus supplement, if applicable.

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

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

The date of this prospectus is June 26, 2014

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission ("SEC") using a "shelf" registration process. Under this shelf registration process, we may from time to time offer up to $150,000,000 in total of (i) shares of our common stock, par value $0.0001 per share, (ii) shares of our preferred stock, par value $0.0001 per share, in one or more series, (iii) warrants to purchase shares of common stock or preferred stock or (iv) any combination of our common stock, preferred stock or warrants, either individually or as units consisting of one or more of the foregoing, each at prices and on terms to be determined at the time of sale. The common stock, preferred stock, warrants and units are collectively referred to in this prospectus as "securities." The securities offered pursuant to this prospectus may be one or more series of issuances and the total offering price of the securities will not exceed $150,000,000 or its equivalent (based on the applicable exchange rate at the time of the sale) in one or more foreign currencies, currency units or composite currencies as shall be designated by us.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement with specific information about the terms of that offering and may also provide a free writing prospectus. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus. If there is any inconsistency between the information in this prospectus and the prospectus supplement, you should rely on the information in the prospectus supplement. You should read both this prospectus and any prospectus supplement together with the additional information described below under the heading "Where You Can Find More Information" and "Incorporation of Certain Information by Reference."

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

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

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

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SUMMARY

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

Our Company

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

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

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

Archexin®

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

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

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

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RX-3117

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

Supinoxin (RX-5902)

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

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

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

Principal Executive Offices

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

Securities We Are Offering

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

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

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When we use the term “securities” in this prospectus, we mean any of the securities we may offer with this prospectus, unless we say otherwise. The total dollar amount of all securities that we may issue will not exceed $150,000,000. This prospectus, including the following summary, describes the general terms that may apply to the securities. We will describe the specific terms of any particular securities that we may offer in a separate supplement to this prospectus.

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

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

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

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

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

Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends

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

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

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

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RISK FACTORS

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

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

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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," "es or similar terminology. Although we believe that the expectations reflected in our forward-looking statements are reasonable as of the date we make them, actual results could differ materially from those currently anticipated due to a number of factors, including risks relating to:

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

Further information on the factors and risks that could affect our business, financial condition and results of operations, are set forth in this prospectus under "Risk Factors" and in our filings with the SEC, which are available at http://www.sec.gov. Any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is

not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Except as required by law, we undertake no obligation to publicly revise our forward-looking statements to reflect events or circumstances that arise after the date of this prospectus or the date of documents incorporated by reference in this prospectus.

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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.

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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.

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

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

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

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DESCRIPTION OF COMMON STOCK

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

Authorized and Outstanding Common Stock

Our Amended and Restated Certificate of Incorporation provides that we have authority to issue 500,000,000 shares of our common stock, par value $0.0001 per share. As of June 16, 2014, there were 178,133,318 shares of common stock issued and outstanding, and there were outstanding warrants to purchase approximately an additional 15,984,204 shares of our common stock and options to purchase 10,306,601 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.

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Transfer Agent and Registrar

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

Limitations of Director Liability

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

· any breach of the director's duty of loyalty to us or our stockholders;

· acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;

. unlawful payments of dividends or unlawful stock repurchases or redemptions; and

· any transaction from which the director derived an improper personal benefit.

Indemnification

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

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DESCRIPTION OF PREFERRED STOCK

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

Preferred Stock That We May Offer and Sell to You

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

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

Those terms may include:

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

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

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

Voting Rights

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

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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.

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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 16, 2014, we had outstanding warrants to purchase 15,984,204 shares of common stock, having exercise prices ranging from $0.41 to $1.90 and expiration dates from June 30, 2014 to January 21, 2019. Those warrants are not related to the registration statement of which this prospectus forms a part and the shares issued to the warrant holders upon exercise will not be issued pursuant to this prospectus or the registration statement.

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

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

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

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

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

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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.

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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.

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RATIO OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

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

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

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

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

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

This prospectus incorporates by reference the documents listed below that we previously have filed with the SEC and any additional documents that we may file with the SEC (File No. 001-34079) under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering of the securities. These documents contain important information about us.

- Our Annual Report on Form 10-K for the year ended December 31, 2013 filed with the SEC on March 21, 2014, together with those portions of our Definitive Proxy Statement on Schedule 14A filed with the SEC on April 18, 2014 and incorporated by reference into our Annual Report on Form 10-K;

- Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2014 filed with the SEC on May 14, 2014;

- Our Current Reports on Form 8-K (other than portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits accompanying such reports that are related to such items) filed with the SEC on January 15, 2014, January 21, 2014, March 3, 2014, and June 9, 2014;

- The description of our common stock contained in our Registration Statement on Form 8-A filed under the Exchange Act on May 23, 2008, including any amendment or report filed for the purpose of updating such description; and

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All documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and before the termination of the offering of the securities.

We are not, however, incorporating by reference any documents, or portions of documents, whether specifically listed above or arising in the future, which are not deemed "filed" with the SEC.

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

Tae Heum (Ted) Jeong
Senior Vice President & Chief Financial Officer
Rexahn Pharmaceuticals, Inc.
15245 Shady Grove Road, Suite 455
Rockville, Maryland 20850
(240) 268-5300

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act that registers the distribution of the securities offered under this prospectus. The registration statement, including the attached exhibits and schedules and the information incorporated by reference, contains additional relevant information about the securities and us. The rules and regulations of the SEC allow us to omit from this prospectus certain information included in the registration statement. In addition, we file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy this information and the registration statement at the SEC public reference room located at 100 F Street, N.E., Washington D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room.

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

LEGAL MATTERS

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

EXPERTS

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

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$40,000,000
COMMON STOCK

PROSPECTUS SUPPLEMENT

March 16, 2015
