

REPOS THERAPEUTICS INC.
Form 424B5
June 17, 2013

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The information in this preliminary prospectus supplement and accompanying prospectus is not complete and may be changed. This prospectus supplement and accompanying prospectus are not an offer to sell these securities and are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

**This filing is made pursuant to Rule 424(b)(5)
under the Securities Act of 1933, as amended, in connection
with Registration Statement No. 333-184471**

Subject to Completion
Preliminary Prospectus Supplement dated June 17, 2013

[PROSPECTUS SUPPLEMENT](#)
(To Prospectus dated October 25, 2012)

3,000,000 Shares

Common Stock

We are selling 3,000,000 shares of our common stock.

Our shares trade on the Nasdaq Capital Market under the symbol "RPRX." On June 14, 2013, the last sale price of the shares as reported on the Nasdaq Capital Market was \$18.74 per share.

Investing in the common stock involves risks that are described in the "Risk Factors" section beginning on page S-5 of this prospectus supplement.

| | Per Share | Total |
|-----------------------|-----------|-------|
| Public offering price | \$ | \$ |
| Underwriting discount | \$ | \$ |

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Proceeds, before expenses, to us \$ \$

The underwriters may also exercise their option to purchase up to an additional 450,000 shares from us, at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The shares will be ready for delivery on or about _____, 2013.

BofA Merrill Lynch

Lazard Capital Markets

Ladenburg Thalmann & Co. Inc.

Ascendant Capital Markets, LLC

The date of this prospectus supplement is June _____, 2013.

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No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus supplement or the accompanying prospectus. You must not rely on any unauthorized information or representations. This prospectus supplement and the accompanying prospectus is an offer to sell only the shares offered hereby, and only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus supplement and the accompanying prospectus is current only as of the respective dates thereof.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a "shelf" registration process. This document consists of two parts. The first part is this prospectus supplement, which describes the specific terms of this offering. The second part is the accompanying prospectus, which provides more general information about securities we may offer from time to time, some of which may not apply to this offering. We urge you to carefully read this prospectus supplement and the accompanying prospectus, and the documents incorporated by reference herein and therein, before buying any of the shares being offered under this prospectus supplement. This prospectus supplement may add to or update information contained in the accompanying prospectus and the documents incorporated by reference therein. To the extent that any statement we made in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference therein that were filed with the SEC prior to the date of this prospectus supplement, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference therein. Generally, when we refer to the prospectus, we are referring to this prospectus supplement and the accompanying prospectus combined.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus or contained in any free writing prospectus prepared by or on our behalf. We have not, and the underwriters have not, authorized anyone to provide you with information that is in addition to or different from that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus and the information contained in any free writing prospectuses we have authorized for use in connection with this offering. We take, and the underwriters take, no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus supplement and the accompanying prospectus and the 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 are accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of shares of our common stock.

Unless stated otherwise or the context requires otherwise, references in this prospectus supplement and the accompanying prospectus to "RPRX," "we," "us," "our" or "the Company" refer to Repros Therapeutics Inc., a Delaware corporation, and its subsidiaries.

This prospectus supplement and the accompanying prospectus, including the information incorporated by reference into this prospectus supplement and the accompanying prospectus, and any free writing prospectuses we have authorized for use in connection with this offering, include trademarks, service marks and trade names owned by us or others companies. Androxal® and Proellex® are registered trademarks owned by us. All trademarks, service marks and trade names included or incorporated by reference into this prospectus supplement and the accompanying prospectus and any free writing prospectuses we have authorized for use in connection with this offering, are the property of their respective owners.

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FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, the documents that we have filed with the SEC that are incorporated by reference into this prospectus supplement or accompanying prospectus and any free writing prospectus contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and within the meaning of Section 21E of the Exchange Act that are subject to the "safe harbor" created by those sections. These forward-looking statements can generally be identified as such because the context of the statement will include words such as "may," "will," "expect," "anticipate," "intend," "believe," "hope," "assume," "estimate," "plan," "future," "potential," "likely," "unlikely," "opportunity," "predict," "continue," "should," or the negative of these terms and similar expressions intended to identify forward-looking statements. Discussions containing these forward-looking statements may be found, among other places, in "Business" and in "Management's Discussion and Analysis of Financial Condition and Results of Operations" incorporated by reference from our most recent annual report on Form 10-K and from our quarterly report on Form 10-Q for the quarterly period ended subsequent to our filing of such annual report on Form 10-K, as well as any amendments thereto reflected in subsequent filings with the SEC. These forward-looking statements include but are not limited to statements about:

our strategy;

the progress, timing and results of our development programs, including clinical testing;

sufficiency of our cash resources;

revenues from potential collaborations;

product development;

our research and development and other expenses; and

our operations and legal risks.

These forward-looking statements are based largely on our expectations and projections about future events and future trends affecting our business, and are subject to risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Before deciding to purchase our common stock, you should carefully consider the risk factors described in the "Risk Factors" section of this prospectus supplement, in addition to the other information set forth in this prospectus supplement, the accompanying prospectus, any authorized free writing prospectus and the documents incorporated by reference herein and therein.

In addition, past financial and/or operating performance is not necessarily a reliable indicator of future performance and you should not use our historical performance to anticipate results or future period trends. We can give no assurances that any of the events anticipated by the forward-looking statements will occur or, if any of them do, what impact they will have on our results of operations and financial condition.

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 filing of this prospectus supplement or any authorized free writing prospectus, or documents incorporated by reference herein and therein.

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SUMMARY

This summary highlights selected information appearing elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus, and may not contain all of the information that is important to you in making your investment decision. This prospectus supplement and the accompanying prospectus include information about the shares of common stock that we are offering as well as information regarding our business. You should read this prospectus supplement and the accompanying prospectus, including the information incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety. You should carefully consider the information set forth under "Risk Factors" beginning on page S-5 of this prospectus supplement, the information set forth under "Risk Factors" beginning on page 3 of the accompanying prospectus and the information set forth under "Risk Factors" in our annual report on Form 10-K for the year ended December 31, 2012, which is incorporated herein by reference, before making your investment decision.

Repos Therapeutics Inc.

Overview

We are a development stage biopharmaceutical company focused on the development of new drugs to treat hormonal and reproductive system disorders. Both of our product candidates have exhibited consistent efficacy results in the studies that we have completed to date, and we believe the studies presently underway or scheduled to start this year will significantly progress both clinical development programs.

We are developing Androxal, an oral therapy that normalizes testicular function, for the treatment of low testosterone due to secondary hypogonadism. Secondary hypogonadism is associated with obesity and we believe it is among the most common causes of low testosterone in men. It is estimated that 13 million men in the U.S. experience low levels of testosterone, and the condition is becoming recognized with more frequency. In 2012, sales of preparations for the treatment of low testosterone exceeded \$1 billion in the U.S. and first tier pharmaceutical companies have entered the low testosterone marketplace.

We believe that Androxal is highly differentiated from currently marketed testosterone treatments or those treatments in late stage development because it is an oral therapy and it treats the cause of secondary hypogonadism, which is inadequate pituitary hormones. We believe that by treating the cause of secondary hypogonadism Androxal also has the potential to maintain reproductive status and potentially improve overall metabolic profiles.

In December 2011, we completed a Phase 2B study of Androxal in men with secondary hypogonadism, but naïve to testosterone treatment, at the recommendation of the Food and Drug Administration, or FDA. Top line results of this study demonstrated that Androxal was generally well tolerated compared to placebo and that there were no drug related serious adverse events that led to discontinuation. We met with the FDA in May 2012 to discuss the design of pivotal Phase 3 efficacy studies for Androxal as well as the components of the overall drug development program required for a New Drug Application, or NDA, submission. During this meeting, we agreed upon registration requirements for Androxal oral therapy for the treatment of secondary hypogonadism. In July 2012, we announced that we reached an agreement with the FDA for the design of the pivotal efficacy studies for Androxal for the treatment of secondary hypogonadism. The pivotal studies are being conducted under a Special Protocol Assessment or SPA. On March 27, 2013, we announced that the top-line results from our first pivotal Phase 3 study, ZA-301, met both co-primary endpoints mandated by the FDA. Additionally, we have completed enrollment into a 500 subject open label safety study in February 2013 and completed enrollment into a one year dual-energy X ray absorptiometry, or DEXA,

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study in January 2013. Depending on study enrollment and the completion of other studies, we believe we may be able to submit an NDA by mid 2014.

We are also developing Proellex, an orally administered selective blocker of the progesterone receptor in women, for the treatment of uterine fibroids and endometriosis. Uterine fibroids and endometriosis affect millions of women of reproductive age. Proellex has shown statistically significant results in previous Phase 2 studies for endometriosis and uterine fibroids. We completed a low dose escalating study as permitted by the FDA in late 2011, to determine both signals of efficacy and safety for low oral doses of the drug. There was no evidence of elevations of liver enzymes over baseline, suggesting these lower doses avoid the type of adverse events seen at much higher doses in earlier studies. In October 2012, we announced that the FDA has agreed to a reclassification of the full clinical hold to a partial clinical hold on low dose oral Proellex to allow us to conduct a Phase 2 study in the treatment of endometriosis. We initiated this study in November 2012. To date, we have experienced difficulty enrolling subjects into this study. Depending on study enrollment, we believe we can release results from this study in the second quarter of 2014.

The FDA has accepted an Investigational New Drug Application, or IND, for vaginally delivered Proellex and, as a result, we commenced a Phase 2 vaginal administration study for uterine fibroids in the first quarter of 2012 and reported final study results in January 2013. We held an end of Phase 2 meeting with the FDA, in the last half of May 2013, to discuss a Phase 3 study design for the vaginally delivered Proellex as a treatment for uterine fibroids. The FDA recommended that a Phase 2b study should be conducted prior to commencing a Phase 3 program. Additionally, we have begun enrolling subjects who completed the Phase 2 study into a one year open label safety trial in order to begin collecting long term safety data which we expect the FDA to require in connection with the submission of an NDA.

Our Research and Development Program

Our product development pipeline is summarized in the table below:

| Product Candidate (Indication) | Status | Next Expected Milestone(s) |
|---------------------------------------|---------------|--|
| Androxal | | |
| <i>Secondary Hypogonadism</i> | Phase 3 | Complete second Phase 3 pivotal study (Q4 2013) Complete open label safety study (Q4 2013) Complete DEXA study (Q1 2014) |
| Proellex | | |
| <i>Uterine Fibroids</i> | Phase 2 | Initiate a Phase 2b study (vaginal delivery) (Q4 2013) |
| <i>Endometriosis</i> | Phase 2 | Complete Phase 2 study (oral delivery) (Q2 2014) |

Other Products

We continue limited out-licensing efforts for our phentolamine-based product candidates, including VASOMAX, which had previously been approved for marketing in several countries in Latin America for the treatment of male erectile dysfunction under the brand name Z-Max. VASOMAX has been on partial clinical hold in the U.S. since 1998, and no further development activities are planned.

Business Strategy

We plan to focus our clinical program on (i) conducting Phase 3 secondary hypogonadism trials for Androxal, (ii) conducting a Phase 2b vaginal administration trial for Proellex for uterine fibroids and (iii) conducting a Phase 2 trial for low dose oral Proellex for endometriosis. We anticipate that our current liquidity, together with the net proceeds from this offering, will be sufficient to complete the

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development of our product candidates through NDA approval. We will continue to explore corporate partnering opportunities for assistance in the clinical development funding and commercialization of our products, as appropriate; however, there can be no assurance that an acceptable corporate partnering opportunity will be successfully completed or that the net proceeds from this offering will be sufficient, together with our current liquidity, to fund all of our product development needs through NDA approval.

Corporate Information

We were organized as a Delaware corporation in August 1987. Our principal executive offices are located at 2408 Timberloch Place, Suite B-7, The Woodlands, Texas 77380, and our telephone number is (281) 719-3400. We maintain an Internet website at www.reprosr.com. The information on our website or any other website is not incorporated by reference into this prospectus supplement and does not constitute a part of this prospectus supplement or the accompanying prospectus.

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The Offering

| | |
|--|--|
| Common stock offered by Repros | 3,000,000 shares. |
| Option to purchase additional shares | We have granted the underwriters an option to purchase up to 450,000 shares of our common stock. |
| Offering price | \$ per share. |
| Common stock outstanding prior to this offering | 18,643,986 shares. |
| Common stock to be outstanding after this offering | 21,643,986 shares (or 22,093,986 shares if the Underwriters exercise their overallotment option to purchase additional shares in full). |
| Use of proceeds | We intend to use the net proceeds from this offering for general corporate purposes, including continuing our clinical trials for Androxal and Proellex. See "Use of Proceeds" for additional information. |
| Risk Factors | See "Risk Factors" beginning on page S-5 for a discussion of factors you should carefully consider before making an investment decision. |
| Nasdaq Capital Market symbol | "RPRX" |

The number of shares of common stock outstanding immediately prior to and to be outstanding immediately after this offering is based on the number of shares outstanding as of March 31, 2013, and does not include:

2,235,683 shares of common stock issuable upon the exercise of outstanding options at a weighted average exercise price of \$7.53 per share;

160,529 shares of common stock available for future issuance under our stock option plans; and

1,732,817 shares of common stock issuable upon exercise of our warrants, 877,137 of which are exercisable for \$0.01 per share and 855,680 of which are exercisable for \$2.49 per share.

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RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below and all other information contained in or incorporated by reference in this prospectus supplement and the accompany prospectus, including the risk factors discussed in the section titled "Risk Factors" contained in our most recent Annual Report on Form 10-K for the year ended December 31, 2012 and our other public filings, before making an investment decision. You should also refer to the other information in this prospectus supplement and the accompanying prospectus, including our financial statements and the related notes incorporated by reference in the accompanying prospectus. The risks and uncertainties described in these sections and documents are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations. If any of these risks actually occur, our business, results of operations and financial condition could suffer. In that event the trading price of our common stock could decline, and you may lose all or part of your investment in our common stock. This prospectus supplement, the accompanying prospectus and the incorporated documents also include forward-looking statements and our actual results may differ substantially from those discussed in these forward-looking statements, including the risks mentioned above.

Risks Relating to Our Business

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

We have not designated the amount of net proceeds from this offering that we will use for any particular purpose. Accordingly, our management will have broad discretion as to the application of the net proceeds and could use them for purposes other than those contemplated at the time of this offering. See the section entitled "Use of Proceeds," below. Our stockholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds. Moreover, our management may use the net proceeds for corporate purposes that may not increase our profitability or market value.

Our ability to continue as a going concern may require that we raise additional funds before we are able to successfully commercialize either of our product candidates, without which we may need to cease our business operations and begin liquidation proceedings.

Based upon the amount of cash on hand, the projected net proceeds from this offering, and our current expense assumptions relating to the clinical trial programs for our two product candidates, Androxal and Proellex, we anticipate that we will need additional funds in order to be able to fund our development efforts for Androxal and Proellex through NDA approval. However, we cannot guarantee that our assumptions will be correct and we may need additional funds in order to be able to fund our development effort through FDA approval. We will continue to explore various financing alternatives to address our liquidity needs. No assurance can be given that we will be successful in obtaining additional financing on acceptable terms or at all. We anticipate that if we are able to secure additional financing, such financing will result in significant dilution of the ownership interests of our stockholders and may provide certain rights to the new investors senior to the rights of our current stockholders, including but not limited to, voting rights and rights to proceeds in the event of a sale or liquidation of the Company. We expect to continue to incur significant losses for the foreseeable future, and we may never achieve or sustain profitability. In the event that we are unable to obtain adequate financing to conduct operations, we may need to cease our business operations and begin liquidation proceedings. If we need to liquidate our assets, we would likely realize significantly less from them than the values at which they are carried on our financial statements. The funds resulting from the liquidation of our assets would be used first to pay off the debt owed to any secured and unsecured creditors before any funds would be available to pay our stockholders, and any shortfall in the proceeds would directly

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reduce the amounts available for distribution, if any, to our creditors and to our stockholders. In the event we were required to liquidate, it is highly unlikely that stockholders would receive any value for their shares.

If we fail to obtain the capital necessary to fund our operations, we may have to delay, reduce or eliminate our research and development programs or commercialization efforts, dispose of assets or liquidate.

We expect to make additional capital outlays and to increase operating expenditures over the next several years to support our preclinical development and clinical trial activities, particularly with respect to clinical trials for Androxal and Proellex. Our current cash on hand together with the net proceeds of this offering are not expected to be sufficient to fund all such preclinical and clinical development activities for such product candidates. In order to fund such activities, we may seek additional funding through public or private financings, including equity or debt financings, and/or through other means, including collaborations and license agreements. We do not know whether additional financing will be available when needed, or that, if available, we will obtain financing on terms favorable to our stockholders or us. If we cannot raise adequate funds, we may be required to:

delay, reduce the scope of or eliminate one or more of our development programs;

relinquish, license or otherwise dispose of rights to technologies, product candidate or products that we would otherwise seek to develop or commercialize ourselves at an earlier stage or on terms that are less favorable than might otherwise be available; or

liquidate and dissolve our company.

Our future capital requirements will depend upon a number of factors, including:

the size, complexity, results and timing of our clinical programs;

the cost to obtain sufficient supply of the compounds necessary for our product candidates at a reasonable cost;

the time and cost involved in obtaining regulatory approvals;

the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims; and

competing technological and market developments.

These factors could result in variations from our currently projected operating and liquidity requirements.

Because the data from our preclinical studies and early clinical trials for our product candidates are not necessarily predictive of future results, we can provide no assurances that any of them will have favorable results in clinical trials or receive regulatory approval.

Before we can obtain regulatory approval for the commercial sale of any product candidate that we develop, we are required to complete preclinical development and extensive clinical trials in humans to demonstrate its safety and efficacy. To date, long-term safety and efficacy have not been demonstrated in clinical trials for any of our product candidates and, in fact, our product candidate Proellex is currently on partial clinical hold with the FDA due to safety issues experienced in our earlier Phase 2 and Phase 3 clinical trials for endometriosis and uterine fibroids, respectively.

In addition, previous clinical trials for Androxal have been conducted only in limited numbers of patients that may not fully represent the diversity present in larger populations. In addition, these studies have not been subjected to the exacting design requirements typically required by FDA for pivotal trials. Thus the limited data we have obtained may not predict results from studies in larger

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numbers of patients drawn from more diverse populations, and may not predict the ability of Androxal to treat testosterone deficiency due to secondary hypogonadism. We will be required to demonstrate through larger-scale clinical trials that these product candidates are safe and effective for use in a diverse population before we can seek regulatory approvals for their commercial sale.

Favorable results in our early studies or trials may not be repeated in later studies or trials, including continuing preclinical studies and large-scale clinical trials analyzed with more rigorous statistical methods, and our drug candidates in later-stage trials may fail to show desired safety and efficacy despite having progressed through earlier-stage trials. Unfavorable results from ongoing preclinical studies or clinical trials could result in delays, modifications or abandonment of ongoing or future clinical trials. Clinical results are frequently susceptible to varying interpretations that may delay, limit or prevent regulatory approvals. Negative or inconclusive results or adverse medical events during a clinical trial could cause a clinical trial to be delayed, repeated or terminated. In addition, we may report top-line data from time to time, which is based on a preliminary analysis of key efficacy and safety data; such data may be subject to change following a more comprehensive review of the data related to the applicable clinical trial. If Androxal, Proellex, or any other potential future product candidate fails to demonstrate sufficient safety and efficacy in any clinical trial, we would experience potentially significant delays in, or be required to abandon, development of that product candidate. If we delay or abandon our development efforts related to Androxal or Proellex, we may not be able to generate sufficient revenues or raise the additional capital necessary to continue operations or become profitable.

We have a history of operating losses, and we expect to incur increasing net losses and may not achieve or maintain profitability for some time or at all.

We have experienced significant operating losses in each fiscal year since our inception. As of March 31, 2013, we had accumulated losses of \$217.3 million, approximately \$17.2 million in cash and cash equivalents, and our accounts payable and accrued expenses were approximately \$3.6 million. We expect to continue incurring net losses and we may not achieve or maintain profitability for some time, if at all. As we increase expenditures for the clinical development of our products, we expect our total operating losses to increase for at least the next few years. Our ability to achieve profitability will depend on, among other things, successfully completing the development of our products, obtaining regulatory approvals, establishing marketing, sales and manufacturing capabilities or collaborative arrangements with others that possess such capabilities, and raising sufficient funds to finance our activities. There can be no assurance that we will be able to achieve profitability or that profitability, if achieved, can be sustained.

Raising additional funds by issuing securities or through collaboration and licensing arrangements may cause dilution to our stockholders, restrict our operations or require us to relinquish proprietary rights.

We may raise additional funds through public or private equity offerings, debt financings or potential corporate collaborations and licensing arrangements. We cannot be certain that additional funding will be available on acceptable terms, or at all. To the extent that we raise additional capital by issuing equity securities, our stockholders' ownership will be diluted. Any debt financing we enter into may involve covenants that restrict our operations. These restrictive covenants may include limitations on borrowing and specific restrictions on the use of our assets, as well as prohibitions on our ability to create liens, pay dividends, redeem capital stock or make investments. In addition, if we raise additional funds through collaboration and licensing arrangements, it may be necessary to relinquish potentially valuable rights to our potential products or proprietary technologies, or grant licenses on terms that are not favorable to us. For example, we might be forced to relinquish all or a portion of our sales and marketing rights with respect to Androxal, Proellex, or other potential products or license intellectual property that enables licensees to develop competing products.

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We are thinly staffed and highly dependent on a limited number of management persons and key personnel, and if we lose these members of our team or are unable to attract and retain additional qualified personnel, our future growth and ability to compete would suffer.

The competition for qualified personnel in the biopharmaceutical field is intense, and our future success depends upon our ability to attract, retain and motivate highly skilled scientific, technical and managerial employees. We had only 26 full-time employees at June 15, 2013, including our President and Chief Executive Officer, Joseph S. Podolski. We are highly dependent on Mr. Podolski and our professional staff for the management of our company and the development of our technologies. Mr. Podolski has an employment agreement with us. There can be no assurance that any of these employees will remain with us through development of our current product candidates. The loss of the services of any of our employees could delay or curtail our research and product development efforts.

Our plan to use collaborations to leverage our capabilities may not be successful.

As part of our business strategy, we may enter into collaboration arrangements with strategic partners to develop and commercialize our product candidates. For our collaboration efforts to be successful, we must identify partners whose competencies complement ours. We must also successfully enter into collaboration agreements with them on terms attractive to us and integrate and coordinate their resources and capabilities with our own. We may be unsuccessful in entering into collaboration agreements with acceptable partners or negotiating favorable terms in these agreements. In addition, we may face a disadvantage in seeking to enter into or negotiating collaborations with potential partners because other potential collaborators may have greater management and financial resources than we do. Also, we may be unsuccessful in integrating the resources or capabilities of these collaborators. In addition, our collaborators may prove difficult to work with or less skilled than we originally expected. If we are unsuccessful in our collaborative efforts, our ability to develop and market product candidates could be severely limited.

Risks Relating to Our Product Development Efforts

Changes in existing regulations and the adoption of new regulations may increase our costs and otherwise adversely affect our business, results of operations and financial condition.

Our research and development activities, preclinical studies and clinical trials, and the manufacturing, marketing and labeling of any products we may develop, are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries. Additional government regulation may be established that could prevent or delay regulatory approval of our product candidates or materially increase our costs. Delays in obtaining or rejections of regulatory approvals would adversely affect our ability to commercialize any product candidate we develop and our ability to receive product revenues or to receive milestone payments or royalties from any product rights we might license to others. If regulatory approval of a product candidate is granted, the approval may include significant limitations on the indicated uses for which the product may be marketed or may be conditioned on the conduct of post-marketing surveillance studies.

Delays in the commencement of preclinical studies and clinical trials testing of our current and potential product candidates could result in increased costs to us and delay our ability to generate revenues.

Our product candidates will require continued preclinical studies and extensive clinical trials prior to the submission of a regulatory application for commercial sales. Because of the nature of clinical trials and our lack of sufficient capital, we do not know whether future planned clinical trials will begin on time, if at all. Delays in the commencement of preclinical studies and clinical trials could significantly increase our product development costs and delay any product commercialization. In

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addition, many of the factors that may cause, or lead to, a delay in the commencement of clinical trials may also ultimately lead to denial of regulatory approval of a product candidate.

The commencement of clinical trials can be delayed for a variety of reasons, including delays in:

demonstrating sufficient safety and efficacy in past clinical trials to obtain regulatory approval to commence a further clinical trial;

convincing the FDA that we have selected valid endpoints for use in proposed clinical trials;

reaching agreements on acceptable terms with prospective contract manufacturers for manufacturing sufficient quantities of a product candidate; and

obtaining institutional review board approval to conduct a clinical trial at a prospective site.

In addition, the commencement of clinical trials may be delayed due to insufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease, and the eligibility criteria for the clinical trial.

Delays in the completion of, or the termination of, clinical testing of our current and potential product candidates could result in increased costs to us, and could delay or prevent us from generating revenues.

Once a clinical trial has begun, it may be delayed, suspended or terminated by us or the FDA or other regulatory authorities due to a number of factors, including:

lack of adequate funding to continue clinical trials;

lack of effectiveness of any product candidate during clinical trials;

side effects experienced by trial participants or other safety issues;

slower than expected rates of patient recruitment and enrollment or lower than expected patient retention rates;

delays or inability to manufacture or obtain sufficient quantities of materials for use in clinical trials;

inadequacy of or changes in our manufacturing process or compound formulation;

delays in obtaining regulatory approvals to commence a trial, or "clinical holds" or delays requiring suspension or termination of a trial by a regulatory agency, such as the FDA, after a trial is commenced;

changes in applicable regulatory policies and regulations;

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delays in identifying and reaching agreement on acceptable terms with prospective clinical trial sites;

uncertainty regarding proper dosing;

unfavorable results from on-going clinical trials and preclinical studies;

failure of our clinical research organizations to comply with all regulatory and contractual requirements or otherwise fail to perform their services in a timely or acceptable manner;

scheduling conflicts with participating clinicians and clinical institutions;

failure to construct appropriate clinical trial protocols;

insufficient data to support regulatory approval;

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inability or unwillingness of medical investigators to follow our clinical protocols;

difficulty in maintaining contact with subjects during or after treatment, which may result in incomplete data;

the timing of discussions and meetings with the FDA or other regulatory authorities regarding the scope or design of our clinical trials; and

acceptability to the FDA of data obtained from clinical studies conducted in Europe or other non-United States jurisdictions.

Many of these factors that may lead to a delay, suspension or termination of clinical testing of a current or potential product candidate may also ultimately lead to denial of regulatory approval of a current or potential product candidate. In fact, the FDA placed Proellex on clinical hold in summer 2009 due to liver toxicity data resulting from our clinical trials. Though the full clinical hold has been upgraded to a partial clinical hold, there can be no assurance that the partial hold will be lifted at any time.

If we experience delays in the completion of, or termination of, clinical testing of any product candidates in the future, our financial results and the commercial prospects for our product candidates will be harmed, and our ability to generate product revenues will be delayed.

Even if we successfully complete clinical trials for Androxal and Proellex, there is no assurance that we will be able to submit, or obtain FDA approval of, a new drug application.

There can be no assurance that, if our clinical trials for Androxal and Proellex are successfully completed, we will be able to submit an NDA to the FDA or that any NDA we submit will be approved by the FDA in a timely manner, if at all. After completing clinical trials for a product candidate in humans, a drug dossier is prepared and submitted to the FDA as an NDA, and includes all preclinical studies and clinical trial data relevant to the safety and effectiveness of the product at the suggested dose and duration of use for the proposed indication, in order to allow the FDA to review such drug dossier and to consider a product candidate for approval for commercialization in the United States. If we are unable to submit an NDA with respect to Androxal or Proellex, or if any NDA we submit is not approved by the FDA, we will be unable to commercialize that product. The FDA can and does reject NDAs and requires additional clinical trials, even when drug candidates achieve favorable results in large-scale Phase 3 clinical trials. If we fail to commercialize Androxal or Proellex, we may be unable to generate sufficient revenues to continue operations or attain profitability and our reputation in the industry and in the investment community would likely be damaged.

We rely on third parties to conduct clinical trials for our product candidates, and their failure to timely and properly perform their obligations may result in costs and delays that prevent us from obtaining regulatory approval or successfully commercializing our product candidates.

We rely on independent contractors, including researchers at clinical research organizations ("CROs") and universities, in certain areas that are particularly relevant to our research and product development plans, such as for data management for the conduct of clinical trials. The competition for these relationships is intense, and we may not be able to maintain our relationships with them on acceptable terms. Independent contractors generally may terminate their engagements at any time, subject to notice. As a result, we can control their activities only within certain limits, and they will devote only a certain amount of their time conducting research on and trials of our product candidates and assisting in developing them. If they do not successfully carry out their duties under their agreements with us, fail to inform us if these trials fail to comply with clinical trial protocols, or fail to meet expected deadlines, our clinical trials may need to be extended, delayed or terminated. We may not be able to enter into replacement arrangements without undue delays or excessive expenditures. If

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there are delays in testing or regulatory approvals as a result of the failure to perform by our independent contractors or other outside parties, our drug development costs will increase and we may not be able to attain regulatory approval for or successfully commercialize our product candidates.

In addition, we have no control over the financial health of our independent contractors. Several of our independent contractors are in possession of valuable and sensitive information relating to the safety and efficacy of our product candidates, and several others provide services to a significant percentage of the patients enrolled in the respective clinical trials in which such independent contractors participate. Should one or more of these independent contractors become insolvent, or otherwise are not able to continue to provide services to us, the clinical trial in which such contractor participates could become significantly delayed and we may be adversely affected as a result of the delays and additional expenses associated with such event.

The risk of accidental contamination or injury resulting from our handling and disposing of hazardous materials and chemicals may expose us to litigation.

Our research and development involves the controlled use of hazardous materials and chemicals. Although we believe that our procedures for handling and disposing of those materials comply with state and federal regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If such an accident occurs, we could be held liable for resulting damages, which could have a material adverse effect on us.

Risks Relating to Manufacturing Our Products

We currently rely on third-party manufacturers and other third parties for production of our product candidates, and our dependence on these manufacturers may impair the development of our product candidates.

Currently, we do not have the ability internally to manufacture the product candidates that we need to conduct our clinical trials. We terminated our supply agreement with Gedeon Richter for the manufacturing of Proellex due to the clinical hold imposed by the FDA in August 2009; however, we have a large supply of Proellex currently available for our current and planned clinical trial efforts. In the event we require an additional supply of Proellex, we believe that an agreement could be reached with Gedeon Richter to provide such supply when and if needed, but we cannot assure you this will be the case.

Our business would be adversely affected if we are unable to obtain a supply of Proellex when our existing supply is depleted on commercially reasonable terms.

We have a supply agreement with Diagnostic Chemical Limited, doing business as BioVectra, for the supply of the bulk active pharmaceutical ingredient used in Androxal. This agreement runs through July of 2013, subject to automatic one year renewals and the ability of either party to terminate upon 12 months prior notice. While we have obtained all of our supply of Androxal to date from BioVectra and anticipate utilizing them for commercial production if Androxal is approved, should an issue arise with BioVectra we cannot assure you that we would be able to find an acceptable alternative supplier.

For the foreseeable future, we expect to continue to rely on third-party manufacturers and other third parties to produce, package and store sufficient quantities of Androxal, Proellex, and any future product candidates for use in our clinical trials. These product candidates are complicated and expensive to manufacture. If our third-party manufacturers fail to deliver our product candidates for clinical use on a timely basis, with sufficient quality, and at commercially reasonable prices, we may be required to delay or suspend clinical trials or otherwise discontinue development and production of our product candidates. While we may be able to identify replacement third-party manufacturers or develop

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our own manufacturing capabilities for these product candidates, this process would likely cause a delay in the availability of our product candidates and an increase in costs. In addition, third-party manufacturers may have a limited number of facilities in which our product candidates can be produced, and any interruption of the operation of those facilities due to events such as equipment malfunction or failure or damage to the facility by natural disasters could result in the cancellation of shipments, loss of product in the manufacturing process or a shortfall in available product candidates.

Identification of previously unknown problems with respect to a product, manufacturer or facility may result in restrictions on the product, manufacturer or facility.

The FDA stringently applies regulatory standards for the manufacturing of our products. Identification of previously unknown problems with respect to a product, manufacturer or facility may result in restrictions on the product, manufacturer or facility, including warning letters, suspensions of regulatory approvals, operating restrictions, delays in obtaining new product approvals, withdrawal of the product from the market, product recalls, fines, injunctions and criminal prosecution. Any of the foregoing could have a material adverse effect on us.

Our product candidates have only been manufactured in small quantities to date, and we may face delays or complications in manufacturing quantities of our product candidates in sufficient quantities to meet the demands of late stage clinical trials and marketing.

We cannot assure that we will be able to successfully increase the manufacturing capacity or scale-up manufacturing volume per batch, whether on our own or in reliance on third-party manufacturers, for any of our product candidates in a timely or economical manner, or at all. To date our product candidates have been manufactured exclusively by third parties in small quantities for preclinical studies and clinical trials. Future clinical trials of our product candidates, if any, will require increased quantities for future commercial sales in the event that such product candidates are approved by the FDA or foreign regulatory bodies. Significant scale-up of manufacturing requires certain additional developmental work, which the FDA must review and approve to assure product comparability. If we or our third-party manufacturers are unable to successfully increase the manufacturing capacity for a product candidate, the regulatory approval or commercial launch of that product candidate may be delayed or there may be a shortage in supply of that product candidate.

Our product candidates require precise, high-quality manufacturing which may not be available at acceptable costs.

Androxal and Proellex are novel compounds that have never been produced in large scale. As in the development of any new compound, there are underlying risks associated with their manufacture. These risks include, but are not limited to, cost, process scale-up, process reproducibility, construction of a suitable process plant, timely availability of raw materials, as well as regulatory issues associated with the manufacture of an active pharmaceutical agent. Any of these risks may prevent us from successfully developing Androxal or Proellex. Our failure, or the failure of our third-party manufacturers to achieve and maintain these high manufacturing standards, including the incidence of manufacturing errors and reliable product packaging for diverse environmental conditions, could result in patient injury or death, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could seriously hurt our business.

We may experience delays in the development of our product candidates if the third-party manufacturers of our product candidates cannot meet FDA requirements relating to Good Manufacturing Practices.

Our third-party manufacturers are required to produce our product candidates under FDA current Good Manufacturing Practices in order to meet acceptable standards for our clinical trials. If such standards change, the ability of third-party manufacturers to produce our product candidates on

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the schedule we require for our clinical trials may be affected. In addition, third-party manufacturers may not perform their obligations under their agreements with us or may discontinue their business before the time required by us to gain approval for or commercialize our product candidates. Any difficulties or delays in the manufacturing and supply of our product candidates could increase our costs or cause us to lose revenue or postpone or cancel clinical trials.

The FDA also requires that we demonstrate structural and functional comparability between the same drug product produced by different third-party manufacturers. Because we may use multiple sources to manufacture Androxal and Proellex, we may need to conduct comparability studies to assess whether manufacturing changes have affected the product safety, identity, purity or potency of any commercial product candidate compared to the product candidate used in clinical trials. If we are unable to demonstrate comparability, the FDA could require us to conduct additional clinical trials, which would be expensive and significantly delay commercialization of our product candidates.

Risks Relating to Product Commercialization

If commercialized, our product candidates may not be approved for sufficient governmental or third-party reimbursements, which would adversely affect our ability to market our product candidates.

In the United States and elsewhere, sales of pharmaceutical products depend in significant part on the availability of reimbursement to the consumer from third-party payers, such as government and private insurance plans. Third-party payers are increasingly challenging the prices charged for medical products and services. It will be time consuming and expensive for us to go through the process of seeking reimbursement from Medicaid, Medicare and private payers for Proellex and Androxal. Our products may not be considered cost effective, and coverage and reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis. The passage of the Medicare Prescription Drug and Modernization Act of 2003 imposes requirements for the distribution and pricing of prescription drugs, which may negatively affect the marketing of our potential products.

If we successfully develop products but those products do not achieve and maintain market acceptance, our business will not be profitable.

Even if our product candidates are approved for commercial sale by the FDA or other regulatory authorities, the degree of market acceptance of any approved product by physicians, healthcare professionals and third-party payers and our profitability and growth will depend on a number of factors, including:

relative convenience and ease of administration;

the prevalence and severity of any adverse side effects;

availability, effectiveness and cost of alternative treatments;

pricing and cost effectiveness of our drugs;

effectiveness of our or our collaborators' sales and marketing strategies; and

our ability to obtain sufficient third-party insurance coverage or reimbursement.

If Androxal does not provide a treatment regime that is more beneficial than AndroGel, the current standard of care for the treatment of testosterone deficiency, or otherwise provide patient benefit, it likely will not be accepted favorably by the market. If any products we may develop do not achieve market acceptance, then we will not generate sufficient revenue to achieve or maintain profitability.

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In addition, even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if:

new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete;

unforeseen complications arise with respect to use of our products; or

sufficient third-party insurance coverage or reimbursement does not remain available.

In many foreign markets, including the countries in the European Union, pricing of pharmaceutical products is subject to governmental control. In the United States, there have been, and we expect that there will continue to be, a number of federal and state proposals to implement similar governmental pricing controls. While we cannot predict whether such legislative or regulatory proposals will be adopted, the adoption of such proposals could have a material adverse effect on our profitability.

Our liability insurance may neither provide adequate coverage nor may it always be available on favorable terms or at all.

Neither Androxal nor Proellex has been approved for commercial sale. However, the current and future use of our product candidates by us and potential corporate collaborators in clinical trials, and the sale of any approved products in the future, may expose us to liability claims. These claims might be made directly by consumers or healthcare providers or indirectly by pharmaceutical companies, potential corporate collaborators or others selling such products. We may experience financial losses in the future due to product liability claims. We have obtained limited general commercial liability insurance coverage for our clinical trials. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for any of our product candidates. However, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or for liabilities in excess of our insurance limits, our assets may not be sufficient to cover such claims and our business operations could be impaired.

We face significant competition from many companies with substantially greater resources than we have and other possible advantages.

We are engaged in biopharmaceutical product development, an industry that is characterized by extensive research efforts and rapid technological progress. The biopharmaceutical industry is also highly competitive. Our success will depend on our ability to acquire, develop and commercialize products and our ability to establish and maintain markets for any products for which we receive marketing approval. Potential competitors in North America, Europe and elsewhere include major pharmaceutical companies, specialty pharmaceutical companies and biotechnology firms, universities and other research institutions and government agencies. Many of our competitors have substantially greater research and development and regulatory capabilities and experience, and substantially greater management, manufacturing, distribution, marketing and financial resources, than we do. Accordingly, our competitors may:

develop or license products or other novel technologies that are more effective, safer or less costly than the product candidates that we are developing;

obtain regulatory approval for products before we do; or

commit more resources than we can to developing, marketing and selling competing products.

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Our main competitors for the treatment of testosterone deficiency due to secondary hypogonadism are the testosterone replacement therapies currently being marketed. The current standard of care is AndroGel, a topical gel for the replacement of testosterone developed by Solvay Pharmaceuticals (which was acquired by Abbott Laboratories). Abbott is a much larger company than we are, with greater resources and marketing ability. Androxal would also compete with other forms of testosterone replacement therapies such as oral treatments, patches, injectables and a tablet applied to the upper gum. There is another topical gel currently marketed by Auxilium Pharmaceuticals called Testim, and a transdermal patch marketed by Watson Pharmaceuticals called AndroDerm. Eli Lilly and Company also entered into a licensing agreement with a third party for a late stage topical testosterone treatment called Axiron, which has recently become available in pharmacies. There can be no assurance that our product candidates will be more successful than competitive products. In addition, other potential competitors may be developing testosterone therapies similar to ours.

The main therapeutic products competitive with Proellex for the treatment of uterine fibroids and endometriosis are GnRH agonists, including Lupron and the use of approved progestin-based contraceptives for the treatment of endometriosis. In addition, surgical treatment of both uterine fibroids and endometriosis would compete with Proellex, if approved, by removing uterine fibroids and by removing misplaced tissue in women with endometriosis. Furthermore, Abbott has recently licensed a Phase 3 ready molecule from Neurocrine Biosciences Inc. for the treatment of endometriosis. Gedeon Richter and Watson Pharmaceuticals have also entered into an exclusive license agreement to develop and market Esmya (an orally selective progesterone receptor modulator) in the U.S. and Canada.

Risks Relating to Our Intellectual Property

There is a third party individual patent holder that claims priority over our patent application for Androxal.

Therapeutic uses of our Androxal product candidate are covered in the United States by seven issued U.S. patents and five pending patent applications. Foreign coverage of therapeutic uses of our Androxal product candidate includes 61 issued foreign patents and 54 foreign pending patent applications. The issued patents and pending applications relate to methods for treating certain conditions including the treatment of testosterone deficiency in men, the treatment of diabetes mellitus Type 2, the treatment of metabolic syndrome and conditions associated therewith, and the treatment of infertility in hypogonadal men. Androxal (the trans-isomer of clomiphene) is purified from clomiphene citrate. A third party individual holds two issued patents related to the use of an anti-estrogen such as clomiphene citrate and others for use in the treatment of androgen deficiency and disorders related thereto. We requested re-examination of one of these patents by the U.S. Patent and Trademark Office ("PTO") based on prior art. The patent holder amended the claims in the re-examination proceedings, which led the PTO to determine that the amended claims were patentable in view of those publications under consideration and a re-examination certificate was issued. We subsequently filed a second request for re-examination by the PTO in light of a number of additional publications. The request was granted and all of the claims were finally rejected by the PTO in the re-examination. The patent holder appealed the rejections to the PTO Board of Patent Appeals and Interferences (the "PTO Board") which ultimately reversed the rejections of several dependent claims in view of those publications under consideration. The patent holder filed a Notice of Appeal to the Federal Circuit on September 28, 2010 contesting the rejections maintained by the PTO Board. A decision was rendered by the Federal Circuit on December 12, 2011, affirming the rejection of the appealed claims. The PTO issued an Ex Parte Reexamination Certificate on April 29, 2013, cancelling the rejected claims and confirming patentability of the remaining claims. Nevertheless, we believe that our development of Androxal does not infringe any of the remaining claims and that all of the remaining claims are invalid on various grounds including additional prior art publications. We also believe that the second of these two patents is invalid in view of published prior art not considered by the PTO. If necessary, we intend to vigorously

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defend any and all claims against the holder of such patents in a court of competent jurisdiction in order to develop Androxal further. Adverse determinations in litigation proceedings could require us to seek licenses from patent holders which may not be available on commercially reasonable terms, or at all, or may subject us to significant liabilities, in which case we may not be able to successfully commercialize or out-license Androxal until such patents expire or are otherwise no longer in force.

We licensed our rights to Proellex from the NIH and our inability to fulfill our commitments and obligations under such license may result in forfeiture of our rights.

Our rights to Proellex are licensed exclusively to us from the NIH under a license agreement. This license agreement contains numerous detailed performance obligations, with time sensitive dates for compliance, relating to clinical development and commercialization activities required by us or our designated third-party providers, as well as additional financial milestones and royalties. Failure to achieve the benchmarks specified in the commercial development plan attached to the license agreement or meet payment obligations could result in termination of the license agreement and the loss of our rights to develop and commercialize Proellex. We periodically amend our license agreement with the NIH to update the commercial development plan as such plans evolve. There can be no assurance that we will be able to meet any or all of the performance objectives in the future on a timely basis or at all, or that, if we fail to meet any of such objectives, the NIH will agree to revised objectives. The NIH also has the ability to terminate the agreement for an uncured material breach of the agreement, if we do not keep Proellex reasonably available to the public after commercial launch or if we cannot reasonably satisfy unmet health and safety needs, among other reasons.

There can be no assurance that our manufacture, use or sale of our product candidates will not infringe on the patent rights of others.

There can be no assurance that the manufacture, use or sale of any of our product candidates will not infringe the patent rights of others. We may be unable to avoid infringement of the patent rights of others and may be required to seek a license, defend an infringement action or challenge the validity of the patents in court. There can be no assurance that a license to the allegedly infringed patents will be available to us on terms and conditions acceptable to us, if at all, or that we will prevail in any patent litigation. Patent litigation is extremely costly and time-consuming, and there can be no assurance that we will have sufficient resources to defend any possible litigation related to such infringement. If we do not obtain a license on acceptable terms under such patents, or are found liable for infringement, or are not able to have such patents declared invalid, we may be liable for significant money damages, may encounter significant delays in bringing our product candidates to market, or may be precluded from participating in the manufacture, use or sale of any such product candidates, any of which would materially and adversely affect our business.

A dispute regarding the infringement or misappropriation of our proprietary rights or the proprietary rights of others could be costly and result in delays in our research and development activities.

Our commercial success depends upon our ability to develop and manufacture our product candidates and market and sell drugs, if any, and conduct our research and development activities without infringing or misappropriating the proprietary rights of others. We may be exposed to future litigation by others based on claims that our product candidates, technologies or activities infringe the intellectual property rights of others. Numerous United States and foreign issued patents and pending patent applications owned by others also exist in the therapeutic areas in, and for the therapeutic targets for, which we are developing drugs. These could materially affect our ability to develop our product candidates or sell drugs, and our activities, or those of our licensor or future collaborators, could be determined to infringe these patents. Because patent applications can take many years to issue, there may be currently pending applications, unknown to us, which may later result in issued

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patents that our drug candidates or technologies may infringe. There also may be existing patents, of which we are not aware, that our product candidates or technologies may infringe. Further, there may be issued patents and pending patent applications in fields relevant to our business, of which we are or may become aware, that we believe we do not infringe or that we believe are invalid or relate to immaterial portions of our overall drug discovery and development efforts. We cannot assure you that others holding any of these patents or patent applications will not assert infringement claims against us for damages or seeking to enjoin our activities. We also cannot assure you that, in the event of litigation, we will be able to successfully assert any belief we may have as to non-infringement, invalidity or immateriality, or that any infringement claims will be resolved in our favor.

In addition, others may infringe or misappropriate our proprietary rights, and we may have to institute costly legal action to protect our intellectual property rights. We may not be able to afford the costs of enforcing or defending our intellectual property rights against others. There could also be significant litigation and other administrative proceedings in our industry that affect us regarding patent and other intellectual property rights. Any legal action or administrative action against us, or our collaborators, claiming damages or seeking to enjoin commercial activities relating to our drug discovery and development programs could:

require us, or potential collaborators, to obtain a license to continue to use, manufacture or market the affected drugs, methods or processes, which may not be available on commercially reasonable terms, if at all;

prevent us from importing, making, using, selling or offering to sell the subject matter claimed in patents held by others and subject us to potential liability for damages; or

consume a substantial portion of our managerial, scientific and financial resources; or be costly, regardless of the outcome.

Furthermore, because of the substantial amount of pre-trial documents and witness discovery required in connection with intellectual property litigation, there is risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the trading price of our common stock or warrants.

We face substantial uncertainty in our ability to protect our patents and proprietary technology.

Our ability to commercialize our products will depend, in part, on our or our licensor's ability to obtain patents, to enforce those patents and preserve trade secrets, and to operate without infringing on the proprietary rights of others. The patent positions of biopharmaceutical companies are highly uncertain and involve complex legal and factual questions. There can be no assurance that:

Additional patent applications for and relating to our products candidates, Androxal and Proellex, will result in issued patents;

Additional patent protection will be secured for any particular technology;

Any patents that have been or may be issued to us, such as our issued patents and/or pending patent applications relating to Proellex or Androxal, or any patents that have been or may be issued to our licensor, such as the patent(s) and application(s) underlying our Proellex compound, when issued, will be valid and enforceable;

any patents will provide meaningful protection to us;

others will not be able to design around the patents; or

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our patents will provide a competitive advantage or have commercial application.

The failure to obtain and maintain adequate patent protection would have a material adverse effect on us and may adversely affect our ability to enter into, or affect the terms of, any arrangement for the marketing of any product.

We cannot assure that our patents will not be challenged by others.

There can be no assurance that patents owned by or licensed to us will not be challenged by others. We could incur substantial costs in proceedings, including interference proceedings before the PTO and comparable proceedings before similar agencies in other countries in connection with any claims that may arise in the future. These proceedings could result in adverse decisions about the patentability of our or our licensor's inventions and products, as well as about the enforceability, validity or scope of protection afforded by the patents. Any adverse decisions about the patentability of our product candidates could cause us to either lose rights to develop and commercialize our product candidates or to license such rights at substantial cost to us. In addition, even if we were successful in such proceedings, the cost and delay of such proceedings would most likely have a material adverse effect on our business.

Confidentiality agreements with employees and others may not adequately prevent disclosure of trade secrets and other proprietary information, may not adequately protect our intellectual property, and will not prevent third parties from independently discovering technology similar to or in competition with our intellectual property.

We rely on trade secrets and other unpatented proprietary information in our product development activities. To the extent we rely on trade secrets and unpatented know-how to maintain our competitive technological position, there can be no assurance that others may not independently develop the same or similar technologies. We seek to protect trade secrets and proprietary knowledge, in part, through confidentiality agreements with our employees, consultants, advisors, collaborators and contractors. Nevertheless, these agreements may not effectively prevent disclosure of our confidential information and may not provide us with an adequate remedy in the event of unauthorized disclosure of such information. If our employees, scientific consultants, advisors, collaborators or contractors develop inventions or processes independently that may be applicable to our technologies, product candidates or products, disputes may arise about ownership of proprietary rights to those inventions and processes. Such inventions and processes will not necessarily become our property, but may remain the property of those persons or their employers. Protracted and costly litigation could be necessary to enforce and determine the scope of our proprietary rights. If we fail to obtain or maintain trade secret protection for any reason, the competition we face could increase, reducing our potential revenues and adversely affecting our ability to attain or maintain profitability.

We cannot protect our intellectual property rights throughout the world.

Filing, prosecuting, and defending patents on all of our drug discovery technologies and all of our potential drug candidates throughout the world would be prohibitively expensive. Competitors may use our technologies to develop their own drugs in jurisdictions where we have not obtained patent protection. These drugs may compete with our drugs, if any, and may not be covered by any of our patent claims or other intellectual property rights. The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. Many countries, including certain countries in Europe, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties (for example, the patent owner has failed to "work" the invention in that country or the third party has patented improvements). In addition, many countries limit the enforceability of patents against government agencies or government

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contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of the patent. Compulsory licensing of life-saving drugs is also becoming increasingly popular in developing countries either through direct legislation or international initiatives. Such compulsory licenses could be extended to include some of our drug candidates, which could limit our potential revenue opportunities. Moreover, the legal systems of certain countries, particularly certain developing countries, do not favor the aggressive enforcement of patents and other intellectual property protection, particularly those relating to biotechnology and/or pharmaceuticals, which makes it difficult for us to stop the infringement of our patents. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

Risks Related to our Common Stock

Our stock price could decline significantly based on the results and timing of clinical trials of, and decisions affecting, our product candidates.

Results of clinical trials and preclinical studies of our current and potential product candidates may not be viewed favorably by us or third parties, including the FDA or other regulatory authorities, investors, analysts and potential collaborators. The same may be true of how we design the clinical trials of our product candidates and regulatory decisions affecting those clinical trials. Biopharmaceutical company stock prices have declined significantly when such results and decisions were unfavorable or perceived negatively or when a product candidate did not otherwise meet expectations. The final results from our clinical development programs may be negative, may not meet expectations or may be perceived negatively. The designs of our clinical trials (which may change significantly and be more expensive than currently anticipated depending on our clinical results and regulatory decisions) may also be viewed negatively by third parties. We may not be successful in completing these clinical trials on our projected timetable, if at all.

Failure to initiate additional clinical trials or delays in existing clinical trials of Androxal and Proellex, and failure of the FDA to lift the partial clinical hold on Proellex, or unfavorable results or decisions or negative perceptions regarding any of such clinical trials, could cause our stock price to decline significantly.

Future sales or the possibility of future sales of a substantial amount of our common stock may depress our stock price.

Sales of substantial amounts of our common stock after this offering, or the perception that we may issue substantial amounts of common stock, may adversely affect the price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of our common stock, convertible notes or other equity-linked securities would have on the market price of our common stock. In connection with this offering, we are restricted from issuing additional shares of common stock, subject to specified exceptions, for a period of 90 days from the date of this prospectus supplement. Our directors and executive officers have agreed not to sell or otherwise dispose of any of their shares, subject to specified exceptions, for a period of 90 days from the date of this prospectus supplement. In addition the price of our common stock could be affected by hedging or arbitrage trading activity which has occurred and which we expect to continue to occur involving our common stock. This hedging or arbitrage could, in turn, affect the market price of our common stock.

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If you purchase the common stock sold in this offering, you will experience immediate and substantial dilution in your investment. You will experience further dilution upon the exercise of outstanding options and warrants or if we issue additional equity securities in future fundraising transactions.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution with respect to the net tangible book value of the common stock you purchase in this offering. Based on the assumed public offering price of \$18.74 per share which is the last sale price of our common stock on June 14, 2013 and our net tangible book value as of March 31, 2013, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$15.68 per share with respect to the net tangible book value of the common stock. See the section entitled "Dilution" for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

In addition, we have a significant number of stock options and warrants outstanding. To the extent that outstanding stock options or warrants have been or may be exercised or other shares issued, investors purchasing our common stock in this offering will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders or result in downward pressure on the price of our common stock.

The trading price of our common stock has been volatile and is likely to be volatile in the future.

The trading price of our common stock has been highly volatile. Since January 1, 2011 through June 14, 2013, the sale price of our stock price has fluctuated from a low of \$2.37 to a high of \$20.78. The market price for our common stock and warrants will be affected by a number of factors, including:

the denial or delay of regulatory clearances or approvals of our drug candidates or receipt of regulatory approval of competing products;

our ability to accomplish clinical, regulatory and other product development milestones;

the ability of our product candidates, if they receive regulatory approval, to achieve market success;

the performance of third-party manufacturers and suppliers;

actual or anticipated variations in our results of operations or those of our competitors;

developments with respect to patents and other intellectual property rights;

sales of common stock or other securities by us or our stockholders in the future;

additions or departures of key scientific or management personnel;

disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our products;

trading volume of our common stock and warrants;

investor perceptions about us and our industry;

public reaction to our press releases, other public announcements and SEC and other filings;

the failure of analysts to cover our common stock, or changes in analysts' estimates or recommendations;

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the failure by us to meet analysts' projections or guidance;

general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors; and

the other factors described elsewhere in these "Risk Factors" or the section titled "Risk Factors" contained in our other public filings.

The stock prices of many companies in the biotechnology industry have experienced wide fluctuations that have often been unrelated to the operating performance of these companies. Following periods of volatility in the market price of a company's securities, securities class action litigation often has been initiated against a company. If any class action litigation is initiated against us, we may incur substantial costs and our management's attention may be diverted from our operations, which could significantly harm our business.

Our inability to comply with the listing requirements of the Nasdaq Capital Market could result in our common stock and/or warrants being delisted, which could affect their market price and liquidity and reduce our ability to raise capital.

We are required to meet certain qualitative and financial tests to maintain the listing of our common stock and/or warrants on the Nasdaq Capital Market. If we do not maintain compliance with the continued listing requirements for the Nasdaq Capital Market within specified periods and subject to permitted extensions, our common stock and/or warrants may be recommended for delisting (subject to any appeal we would file). If our common stock or warrants are delisted, it could be more difficult to buy or sell our common stock and/or our warrants and to obtain accurate quotations, and the price of our common stock and/or warrants could suffer a material decline. Delisting would also impair our ability to raise capital.

Our rights agreement and certain provisions in our charter documents and Delaware law could delay or prevent a change in management or a takeover attempt that you may consider to be in your best interest.

We have adopted certain anti-takeover provisions, including a rights agreement. The rights agreement will cause substantial dilution to any person who attempts to acquire us in a manner or on terms not approved by our board of directors.

The rights agreement and certain provisions in our certificate of incorporation and bylaws and under Delaware law could delay or prevent the removal of directors and other management and could make more difficult a merger, tender offer or proxy contest involving us that you may consider to be in your best interest. For example, these provisions:

allow our board of directors to issue preferred stock without stockholder approval;

limit who can call a special meeting of stockholders; and

establish advance notice requirements for nomination for election to the board of directors or for proposing matters to be acted upon at stockholder meetings.

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USE OF PROCEEDS

We expect to receive approximately \$52.3 million in net proceeds from the sale of the 3,000,000 shares of common stock offered by us in this offering or approximately \$60.3 million in net proceeds from the sale of the 3,450,000 shares if the Underwriters exercise their overallotment option to purchase the additional 450,000 shares in full, based on an assumed offering price of \$18.74 per share, the last reported sale price of our common stock on June 14, 2013. "Net proceeds" is what we expect to receive after paying the expenses of this offering, including the Underwriter fees as described in "Underwriting" and other estimated offering expenses payable by us, which include legal, accounting and printing fees.

We intend to use the net proceeds from this offering for general corporate purposes, including continuing our clinical trials for Androxal and Proellex. Our management will have broad discretion in the application of the net proceeds, and investors will be relying on the judgment of our management regarding the application of the proceeds of this offering.

Until we use the net proceeds of this offering, we intend to invest the funds in short-term, investment grade, interest-bearing securities.

Table of Contents**CAPITALIZATION**

The following table sets forth our cash and cash equivalents, and our total capitalization as of March 31, 2013:

on an *actual* basis; and

on an *as adjusted* basis to give effect to the sale of 3,000,000 shares of common stock in this offering, at an assumed public offering price of \$18.74 per share, which is the last reported sale price of our common stock on June 14, 2013.

The *as adjusted* information below is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing. You should read the information in this table together with our Consolidated Financial Statements and related notes and the information set forth under the captions "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" incorporated by reference in this prospectus supplement.

| | As of March 31, 2013 | |
|--|--|-----------------------|
| | Actual | As adjusted(a) |
| | (in thousands, except per share data) | |
| <i>Cash and cash equivalents</i> | \$ 17,150 | \$ 69,497 |
| <i>Equity:</i> | | |
| Common stock, \$0.01 par value, 75,000,000 shares authorized, 18,756,336 shares issued and 18,643,986 outstanding, | 19 | 22 |
| Preferred stock \$0.01 par value, 5,000,000 shares authorized, no shares issued and outstanding, | | |
| Additional paid-in capital | 234,926 | 287,270 |
| Accumulated deficit | (217,276) | (217,276) |
| Accumulated other comprehensive loss | | |
| Treasury stock | (1,380) | (1,380) |
| Total stockholders' equity | 16,289 | 68,636 |
| Total equity | 16,289 | 68,636 |
| <i>Total Capitalization</i> | \$ 16,289 | \$ 68,636 |

(a)

The as adjusted number of shares to be outstanding immediately after the offering as shown above is based on 18,643,986 shares outstanding as of March 31, 2013 and does not include:

2,235,683 shares of common stock issuable upon the exercise of outstanding options at a weighted average exercise price of \$7.53 per share;

160,529 shares of common stock available for future issuance under our stock option plans; and

1,732,817 shares of common stock issuable upon exercise of our warrants, 877,137 of which are exercisable for \$0.01 per share and 855,680 of which are exercisable for \$2.49 per share.

Table of Contents**DILUTION**

If you invest in our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the public offering price per share of our common stock and the pro forma net tangible book value per share of our common stock after this offering.

Our historical net tangible book value as of March 31, 2013 was \$14.0 million, or \$0.75 per share of our common stock. Historical net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the number of shares of our common stock outstanding.

After giving effect to our issuance and sale of 3,000,000 shares of our common stock in this offering at an assumed public offering price of \$18.74 per share, which is the last reported sale price of our common stock on June 14, 2013, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma net tangible book value as of March 31, 2013 would have been \$66.3 million, or \$3.06 per share. This represents an immediate increase in pro forma net tangible book value per share of \$2.31 to existing stockholders and immediate dilution of \$15.68 in pro forma net tangible book value per share to new investors purchasing common stock in this offering. Dilution per share to new investors is determined by subtracting pro forma net tangible book value per share after this offering from the public offering price per share paid by new investors. The following table illustrates this dilution on a per share basis:

| | |
|---|----------|
| Assumed Public offering price per share | \$ 18.74 |
| Historical net tangible book value per share as of March 31, 2013 | \$ 0.75 |
| Increase in net tangible book value per share attributable to new investors | \$ 2.31 |
| Pro forma net tangible book value per share after this offering | \$ 3.06 |
| Dilution per share to new investors | \$ 15.68 |

The shares sold in this offering may be sold at a different price. An increase of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$18.74 per share shown in the table above, assuming that all shares offered herein are sold, would increase our pro forma net tangible book value per share after the offering to \$3.19 per share and would increase the dilution in net tangible book value per share to new investors in this offering to \$16.55 per share, after deducting commissions and estimated offering expenses payable by us. A decrease of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$18.74 per share shown in the table above, assuming that all shares offered herein are sold, would decrease our pro forma net tangible book value per share after the offering to \$2.93 per share and would decrease the dilution in net tangible book value per share to new investors in this offering to \$14.81 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. This information is supplied for illustrative purposes only.

If the underwriters exercise their option to purchase additional shares or if any additional shares are issued in connection with outstanding options or warrants, you will experience further dilution. In addition, we have a significant number of stock options and warrants outstanding. As of March 31, 2013, we had outstanding stock options to purchase 2,235,683 shares of common stock at prices ranging from \$1.38 to \$50.80. As of the same date thereof, we also had 1,732,817 issued warrants, consisting of 877,137 Series A Warrants to purchase 877,137 shares of common stock at an exercise price of \$0.01 per share and 855,680 Series B Warrants to purchase 855,680 shares of common stock at an exercise of \$2.49 per share, for a total of 1,732,817 shares of common stock issuable upon exercise of all such Series A and Series B Warrants. To the extent that the outstanding stock options or warrants have been or may be exercised or other shares issued, investors purchasing our common stock in this offering will experience further dilution. In the event we need to raise additional capital in the future and we issue additional equity securities, our then existing stockholders will also experience dilution.

Table of Contents**PRICE RANGE OF COMMON STOCK**

Our common stock is traded on the Nasdaq Capital Market under the symbol "RPRX". The following table shows the high and low sale prices per share of our common stock as reported by the Nasdaq Capital Market during the periods presented. Prices per share of our common stock have been adjusted to reflect the 1-for-4 reverse split of our common stock that was effected on October 14, 2010.

| | Price Range | |
|--|-------------|---------|
| | High | Low |
| 2011 | | |
| First Quarter | \$ 6.85 | \$ 2.37 |
| Second Quarter | 6.49 | 4.52 |
| Third Quarter | 6.74 | 3.70 |
| Fourth Quarter | 5.48 | 3.34 |
| 2012 | | |
| First Quarter | \$ 5.36 | \$ 3.73 |
| Second Quarter | 9.88 | 3.68 |
| Third Quarter | 16.37 | 7.82 |
| Fourth Quarter | 17.00 | 11.75 |
| 2013 | | |
| First Quarter | \$ 19.12 | \$ 8.42 |
| Second Quarter (April 1 st through June 14) | 20.78 | 14.10 |

All of the foregoing prices reflect interdealer quotations, without retail mark-up, markdowns or commissions and may not necessarily represent actual transactions in the common stock.

On June 14, 2013, the last sale price of our common stock, as reported by the Nasdaq Capital Market, was \$18.74 per share. On March 31, 2013, there were approximately 160 holders of record and approximately 3,300 beneficial holders of our common stock.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently intend to retain our future earnings, if any, for use in our business and therefore do not anticipate paying cash dividends in the foreseeable future.

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DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus supplement, our authorized capital stock consists of 75,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share.

As of March 31, 2013, there were 18,643,986 shares of common stock outstanding and no shares of preferred stock outstanding.

The following summary description of our capital stock is based on the provisions of our amended and restated certificate of incorporation and amended and restated bylaws and the applicable provisions of the Delaware General Corporation Law, or the DGCL. This information is qualified entirely by reference to the applicable provisions of our amended and restated certificate of incorporation, amended and restated bylaws and the DGCL. For information on how to obtain copies of our amended and restated certificate of incorporation and amended and restated bylaws, see "Where You Can Find More Information."

Common Stock

The holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. The holders of common stock are not entitled to cumulative voting rights with respect to the election of directors, and as a consequence, minority stockholders will not be able to elect directors on the basis of their votes alone.

Subject to preferences that may be applicable to any then outstanding shares of preferred stock, holders of common stock are entitled to receive ratably such dividends as may be declared by the Board of Directors out of funds legally available therefor. In the event of a liquidation, dissolution or winding up of us, holders of the common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any then outstanding shares of preferred stock. Holders of common stock have no preemptive rights and no right to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to our common stock. All outstanding shares of common stock are fully paid and non-assessable.

Preferred Stock

Our amended and restated certificate of incorporation provides that our Board of Directors has the authority, without further action by the stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions of this preferred stock, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and the number of shares constituting any series or the designation of a series, without further vote or action by the stockholders. Any preferred stock so issued by the Board of Directors may rank senior to the common stock with respect to the payment of dividends or amounts upon liquidation, dissolution or winding up of the company, or both. In addition, any such shares of preferred stock may have class or series voting rights. Moreover, under certain circumstances, the issuance of preferred stock or the existence of the unissued preferred stock might tend to discourage or render more difficult a merger or other change in control of us. We have no present plan to issue any shares of preferred stock.

Rights Plan

We are party to a rights agreement, as amended, pursuant to which a dividend consisting of one preferred stock purchase right was distributed for each share of our common stock held as of the close of business on September 13, 1999, and to each share of common stock issued thereafter until the earlier of (i) the distribution date which is defined in the rights plan, (ii) the redemption date which is

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defined in the rights plan or (iii) September 13, 2015. The rights plan is designed to deter coercive takeover tactics and to prevent an acquirer from gaining control of us without offering fair value to our stockholders. The rights will expire on September 13, 2015, subject to earlier redemption or exchange as provided in the rights plan. Each right entitles its holder to purchase from us one one-hundredth of a share of a new series of Series One Junior Participating Preferred Stock at a price of \$20.00 per one one-hundredth of a share, subject to adjustment. The rights are generally exercisable only if a person acquires beneficial ownership of 20% or more of our outstanding common stock.

A complete description of the rights, the rights plan with Computershare Trust Company, N.A., as rights agent, and the Series One Junior Participating Preferred Stock is hereby incorporated by reference from the information appearing under the caption "Item 1. Description of the Registrant's Securities to be Registered" contained in the Registration Statement on Form 8-A filed on September 3, 1999, and as amended by amendments to such Registration Statement on Form 8-A/A filed on September 11, 2002, October 31, 2002, June 30, 2005, January 10, 2008, October 10, 2008 and September 9, 2010.

Anti-Takeover Effects of Provisions of Delaware Law and Our Charter Documents

Certain provisions of Delaware law and our amended and restated certificate of incorporation and amended and restated bylaws could make more difficult the acquisition of us by means of a tender offer, a proxy contest, or otherwise, and the removal of incumbent officers and directors. These provisions are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of us to first negotiate with us. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweighs the disadvantages of discouraging such proposals, including proposals that are priced above the then current market value of our common stock, because, among other things, negotiation of such proposals could result in an improvement of their terms.

Delaware Takeover Statute. We are subject to section 203 of the DGCL. This provision generally prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date such stockholder became an interested stockholder, unless:

prior to such date the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66²/₃% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines business combination to include:

any merger or consolidation involving the corporation and the interested stockholder;

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any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;

subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;

any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by such entity or person.

Charter Documents. Our amended and restated certificate of incorporation provides:

for the authority of our board to issue up to 5,000,000 shares of preferred stock and to determine the price, rights, preferences and privileges of these shares, without stockholder approval;

that any action required or permitted to be taken by our stockholders may be effected at a duly called annual or special meeting of stockholders or by written consent of the holders of no less than the number of shares of capital stock required to take such action at an annual or special meeting;

that special meetings of the stockholders may be called only by the chairman of the board, president, the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors, or by the holders of the shares entitled to cast not less than thirty percent (30%) of the votes at the meeting; and

for no cumulative voting.

These and other provisions contained in our amended and restated certificate of incorporation and amended and restated bylaws could delay or discourage some types of transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares over then current prices, and may limit the ability of stockholders to remove current management or approve transactions that stockholders may deem to be in their best interests and, therefore, could adversely affect the price of our common stock.

Limitation on Liability and Indemnification of Officers and Directors

Section 145(a) of the DGCL provides in relevant part that "[a] corporation shall have power to 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." With respect to derivative actions, Section 145(b) of the DGCL provides in relevant part that "[a] corporation shall

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have power to 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 person's service in one of the capacities specified in the preceding sentence] 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 such person shall have been adjudged to be liable to the corporation unless and only to the extent that the 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, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper."

Our amended and restated certificate of incorporation provides that to the fullest extent permitted by the DGCL, none of our directors shall be personally liable to us for monetary damages for breach of fiduciary duty as a director. The amended and restated certificate of incorporation also provides that no amendment or repeal of such provision shall apply to or have any effect on the right to indemnification permitted thereunder with respect to claims arising from acts or omissions occurring in whole or in part before the effective date of such amendment or repeal whether asserted before or after such amendment or repeal.

Our amended and restated bylaws provide for the indemnification of directors and officers to the fullest extent not prohibited by the DGCL and that the Company shall have the power to indemnify its employees and other agents as set forth in the DGCL. We have entered into indemnification agreements with our directors and executive officers and intend to enter into indemnification agreements with any new directors and executive officers in the future.

We also carry officer and director liability insurance with respect to certain matters, including matters arising under the Securities Act.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A.

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**MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO
NON-U.S. HOLDERS OF OUR COMMON STOCK**

The following summary describes the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income taxes and does not deal with state, local or non-U.S. tax consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences other than income taxes. Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Internal Revenue Code of 1986, as amended, or the Code, such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, persons that hold our common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security" or integrated investment or other risk reduction strategy, partnerships and other pass-through entities, and investors in such pass-through entities or entities that are treated as disregarded entities for U.S. federal income tax purposes (regardless of their places of organization or formation). Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the IRS with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions. This discussion assumes that the Non-U.S. Holder holds our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment).

The following discussion is for general information only and is not tax advice. Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income tax consequences of acquiring, owning and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local or non-U.S. tax consequences or any U.S. federal non-income tax consequences.

The following discussion is for general information only and is not an indication of our dividend policy. We have never declared or paid cash dividends on our capital stock. We currently intend to retain our future earnings, if any, in our business and therefore do not anticipate paying cash dividends in the foreseeable future.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is not a U.S. Holder. A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes (a) an individual who is a citizen or resident of the United States, (b) a corporation or other entity treated as a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia, (c) an estate the income of which is subject to U.S. federal income taxation regardless of its source or (d) a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person. Also, partnerships, or other entities that are treated as partnerships for U.S. federal income tax purposes (regardless of their place of organization or formation) and entities that are treated as disregarded entities for U.S. federal income tax purposes (regardless of their place of

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organization or formation) are not addressed by this discussion and are, therefore, not considered to be Non-U.S. Holders for the purposes of this discussion.

Distributions

Subject to the discussion below, distributions, if any, made on our common stock to a Non-U.S. Holder of our common stock to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly executed IRS Form W-8BEN, or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, you should consult with your own tax advisor to determine if you are able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment that such holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular graduated rates, unless a specific treaty exemption applies. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce your adjusted basis in our common stock as a non-taxable return of capital, but not below zero, and then any excess will be treated as gain and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Our Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other disposition of our common stock unless (a) the gain is effectively connected with a trade or business of such holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment that such holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (c) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2)

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at any time within the shorter of the five-year period preceding such disposition or such holder's holding period.

If you are a Non-U.S. Holder described in (a) above, you will be required to pay tax on the net gain derived from the sale at regular graduated U.S. federal income tax rates, unless a specific treaty exemption applies, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (b) above, you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses (even though you are not considered a resident of the United States). With respect to (c) above, in general, we would be a United States real property holding corporation if interests in U.S. real estate comprised (by fair market value) at least half of our business assets. We believe that we are not, and do not anticipate becoming, a United States real property holding corporation, however, there can be no assurance that we will not become a U.S. real property holding corporation in the future. Even if we are treated as a U.S. real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than five percent of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our common stock is regularly traded on an established securities market. There can be no assurance that our common stock will continue to qualify as regularly traded on an established securities market.

Information Reporting Requirements and Backup Withholding

Generally, we or certain financial middlemen must report information to the IRS with respect to any dividends we pay on our common stock including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN or otherwise establishes an exemption. The current backup withholding rate is 28%.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or non-U.S., except that information reporting and such requirements may be avoided if the holder provides a properly executed IRS Form W-8BEN or otherwise meets documentary evidence requirements for establishing Non-U.S. Holder status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

If backup withholding is applied to you, you should consult with your own tax advisor to determine if you are able to obtain a tax benefit or credit with respect to such backup withholding.

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Foreign Accounts

A U.S. federal withholding tax of 30% may apply on dividends and the gross proceeds of a disposition of our common stock paid to a foreign financial institution (as specifically defined by applicable rules), including when the foreign financial institution holds our common stock on behalf of a non-U.S. Holder, unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). This U.S. federal withholding tax of 30% will also apply on dividends and the gross proceeds of a disposition of our common stock paid to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding direct and indirect U.S. owners of the entity. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules. Under certain circumstances, a Non-U.S. Holder might be eligible for refunds or credits of such taxes. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. Holders are encouraged to consult with their own tax advisors regarding the possible implications of the legislation on their investment in our common stock.

Although these rules currently apply to applicable payments made after December 31, 2012, the IRS has issued guidance providing that the withholding provisions described above will generally apply to payments of dividends made on or after January 1, 2014 and to payments of gross proceeds from a sale or other disposition of common stock on or after January 1, 2017.

THE PRECEDING DISCUSSION OF MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAW, AS WELL AS TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, NON-U.S. OR U.S. FEDERAL NON-INCOME TAX LAWS.

Table of Contents**UNDERWRITING**

Merrill Lynch, Pierce, Fenner & Smith Incorporated is acting as representative of each of the underwriters named below. Subject to the terms and conditions set forth in an underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock set forth in the table below.

| Underwriter | Number of Shares |
|--|-------------------------|
| Merrill Lynch, Pierce, Fenner & Smith Incorporated | |
| Lazard Capital Markets LLC | |
| Ladenburg Thalmann & Co. Inc. | |
| Ascendant Capital Markets, LLC | |
| Total | 3,000,000 |

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representative has advised us that the underwriters propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus supplement and to dealers at that price less a concession not in excess of \$0. per share. After the initial offering, the public offering price, concession or any other term of the offering may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares.

| | Per Share | Without Option | With Option |
|----------------------------------|------------------|-----------------------|--------------------|
| Public offering price | \$ | \$ | \$ |
| Underwriting discount | \$ | \$ | \$ |
| Proceeds, before expenses, to us | \$ | \$ | \$ |

The expenses of the offering, not including the underwriting discount, are estimated at \$500,000 and are payable by us. The underwriters have agreed to reimburse us for certain expenses incurred in connection with this offering.

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Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus supplement, to purchase up to 450,000 additional shares at the public offering price, less the underwriting discount. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

No Sales of Similar Securities

We, our executive officers and directors have agreed not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, for 90 days after the date of this prospectus supplement without first obtaining the written consent of the representative. Specifically, we and these other persons have agreed, with certain limited exceptions, not to directly or indirectly

offer, pledge, sell or contract to sell any common stock,

sell any option or contract to purchase any common stock,

purchase any option or contract to sell any common stock,

grant any option, right or warrant for the sale of any common stock,

lend or otherwise dispose of or transfer any common stock,

request or demand that we file a registration statement related to the common stock, or

enter into any swap or other agreement that transfers, in whole or in part, the economic consequence of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise.

With respect to us, the foregoing paragraph shall not apply to (i) issuances of shares of common stock pursuant to employee stock option plans existing on, or upon the conversion or exchange of convertible or exchangeable securities outstanding as of, the date hereof, and (ii) the sale and issuance of the common stock in this offering.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition. In the event that either during the last 17 days of the lock-up period referred to above, we issue an earnings release or material news or a material event relating to us occurs or prior to the expiration of the lock-up period, we announce that we will release earnings results or become aware that material news or a material event will occur during the 16-day period beginning on the last day of the lock-up period, the restrictions described above shall continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

Nasdaq Capital Market Listing

The shares are listed on the Nasdaq Capital Market under the symbol "RPRX."

Price Stabilization, Short Positions

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Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. The representative, however, may

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engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares described above. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option granted to them. "Naked" short sales are sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the completion of the offering.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on the Nasdaq Capital Market, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the underwriters make any representation that the representative will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Passive Market Making

In connection with this offering, underwriters and selling group members may engage in passive market making transactions in the common stock on the Nasdaq Capital Market in accordance with Rule 103 of Regulation M under the Exchange Act during a period before the commencement of offers or sales of common stock and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. If, however, all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of those transactions. The underwriters and dealers are not required to engage in passive market making and may end passive market making activities at any time.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

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Other Relationships

Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve our securities or instruments or securities and/or instruments of our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

We have agreed to pay Trout Capital LLC, a FINRA member, a fee of \$350,000 for investor relations and advisory services provided in connection with this offering. This fee is deemed to constitute underwriting compensation under Rule 5110 of the rules of The Financial Industry Regulatory Authority, Inc.

Lazard Frères & Co. LLC referred this transaction to Lazard Capital Markets LLC and will receive a referral fee from Lazard Capital Markets LLC in connection therewith.

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area (each, a "Relevant Member State"), no offer of shares may be made to the public in that Relevant Member State other than:

- A. to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- B. to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representative; or
- C. in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of shares shall require the Company or the representative to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a "qualified investor" within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representative has been obtained to each such proposed offer or resale.

The Company, the representative and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

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This prospectus supplement and the accompanying prospectus have been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly, any person making or intending to make an offer in that Relevant Member State of shares which are the subject of the offering contemplated in this prospectus supplement and the accompanying prospectus may only do so in circumstances in which no obligation arises for us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither we nor the underwriters have authorized, nor do we or the underwriters authorize, the making of any offer of shares in circumstances in which an obligation arises for us or the underwriters to publish a prospectus for such offer.

For the purpose of the above provisions, the expression "an offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Notice to Prospective Investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

Notice to Prospective Investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing materials relating to us, the offering, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (FINMA), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

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Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus supplement relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus supplement is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for the prospectus supplement. The shares to which this prospectus supplement relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus supplement you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The common stock have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended

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to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The common stock has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of common stock may not be circulated or distributed, nor may the common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the common stock is subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the common stock pursuant to an offer made under Section 275 of the SFA except:

- (a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- (b) where no consideration is or will be given for the transfer;
- (c) where the transfer is by operation of law;
- (d) as specified in Section 276(7) of the SFA; or
- (e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

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LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon by Jackson Walker L.L.P., Houston, Texas. Certain legal matters will be passed upon for the Underwriters by McDermott Will & Emery LLP, Menlo Park, California.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal controls over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2012 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated statements of stockholders' equity for each of the eight years in the period ended December 31, 2001 were audited by Arthur Andersen LLP. Arthur Andersen LLP has not consented to the incorporation of their reports on the consolidated statements of stockholders' equity for each of the eight years in the period ended December 31, 2001 incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2012, and we have dispensed with the requirement to file their consent in reliance upon Rule 437a of the Securities Act. Because Arthur Andersen LLP has not consented to the incorporation of their reports in this prospectus supplement, you will not be able to recover against Arthur Andersen LLP under Section 11 of the Securities Act for any untrue statements of a material fact contained in the financial statements audited by Arthur Andersen LLP or any omissions to state a material fact required to be stated therein.

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WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission, or the SEC. You may read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC, including us. The SEC's Internet site can be found at <http://www.sec.gov>.

We have filed with the Commission a registration statement on Form S-3 relating to the securities covered by this prospectus supplement and accompanying prospectus. This prospectus supplement and the accompanying prospectus are part of the registration statement and do not contain all of the information in the registration statement. You will find additional information about us in the registration statement. Any statement made in this prospectus supplement and the accompanying prospectus concerning a contract or other document of ours is not necessarily complete and you should read the documents that are filed as exhibits to the registration statement or otherwise filed with the SEC for a more complete understanding of the document or matter. Each such statement is qualified in all respects by reference to the document to which it refers. You may inspect without charge a copy of the registration statement at the SEC's Public Reference Room in Washington D.C., as well as through the SEC's website

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus supplement and the accompanying prospectus supplement, the information we file with it, which means that we can disclose important information to you by referring you to other documents that we have filed or will file separately with the SEC. You should read the information incorporated by reference because it is an important part of this prospectus supplement and the accompanying prospectus. We are incorporating by reference into this prospectus supplement the documents and other information listed below and all amendments and supplements to such documents that may be filed with the SEC prior to the time all of the securities offered by the prospectus supplement have been sold or de-registered:

our annual report on Form 10-K for the fiscal year ended December 31, 2012, or the Annual Report;

the information specifically incorporated by reference into our Annual Report from our definitive proxy statement on Schedule 14A, filed with the SEC on April 29, 2013;

our quarterly report on Form 10-Q for the quarter ended March 31, 2013;

our current reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on January 3, 2013, January 7, 2013, January 28, 2013, February 11, 2013, February 11, 2013, February 21, 2013; February 28, 2013, March 25, 2013, March 27, 2013, March 28, 2013, April 1, 2013, April 10, 2013, April 29, 2013, April 29, 2013, May 2, 2013, May 23, 2013, June 3, 2013, and June 17, 2013;

the description of our Rights Agreement contained in our registration statement on Form 8-A filed on September 3, 1999, as amended on September 11, 2002, October 31, 2002, June 30, 2005, January 10, 2008, October 10, 2008 and September 9, 2010, including all amendments and reports filed for the purpose of updating this description;

the description of our common stock contained in our registration statement on Form 8-A filed with the SEC on February 2, 1993, including all amendments and reports filed for the purpose of updating such information; and

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the description of our warrants contained in our registration statement on Form 8-A filed with the SEC on February 3, 2011.

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 to such report that are related to such items) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, prior to the completion of the offering made by this prospectus supplement. Certain statements in and portions of this prospectus supplement and the accompanying prospectus update and supersede information in the above-listed documents incorporated by reference. Likewise, statements in or portions of a future document incorporated by reference in this prospectus supplement and the accompanying prospectus may update and supersede statements in this prospectus supplement and the accompanying prospectus.

We will provide to you, without charge, upon written or oral request, a copy of any of the documents incorporated by reference herein, including exhibits which are specifically incorporated by reference into such documents. Requests should be made to us by mail in care of: Repros Therapeutics Inc. at 2408 Timberloch Place, Suite B-7, The Woodlands, Texas 77380, or by telephone by calling (281) 719-3400; Attention: Katherine A. Anderson.

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PROSPECTUS

**\$100,000,000
Common Stock
Preferred Stock
Warrants
Rights
Units**

From time to time, we may offer and sell, in one or more series:

shares of common stock;

shares of preferred stock;

warrants to purchase, common stock or preferred stock;

rights to purchase common stock or preferred stock; and

units consisting of two or more of these classes of securities.

The securities:

will have a maximum aggregate offering price of \$100,000,000;

will be offered at prices and on terms to be set forth in an accompanying prospectus supplement;

may be offered separately or together, or in separate series;

may be convertible into or exchangeable for other securities; and

may be listed on a national securities exchange, if specified in an accompanying prospectus supplement.

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Our Common Stock, Series A Warrants and Series B Warrants are traded on the Nasdaq Capital Market under the symbols "RPRX", "RPRXW" and "RPRXZ", respectively. On October 24, 2012, the last reported sale price of our common stock on the Nasdaq Capital Market was \$14.07 per share. There is not an active trading market for the warrants.

We will provide the specific terms of the securities in supplements to this prospectus. This prospectus may be used to offer and sell securities only if it is accompanied by a prospectus supplement.

YOU SHOULD READ THIS PROSPECTUS AND ANY PROSPECTUS SUPPLEMENT CAREFULLY BEFORE YOU INVEST, INCLUDING THE RISK FACTORS WHICH BEGIN ON PAGE 3 OF THIS PROSPECTUS.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is October 25, 2012

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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 and the accompanying supplement to this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or the accompanying prospectus supplement. This prospectus and the accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy securities, nor do this prospectus and the accompanying supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities 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 and the accompanying prospectus supplement is accurate on any date subsequent to the date set forth on the front of the 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 and any accompanying prospectus supplement is delivered or securities sold on a later date.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission utilizing a "shelf" registration process. Under this shelf process, we may sell different types of the securities described in this prospectus in one or more offerings up to a total offering amount of \$100,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering and the securities offered by us in that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading "Where You Can Find More Information."

You should rely only on the information contained in this prospectus, any prospectus supplement and the documents we have incorporated by reference. We have not authorized anyone to provide you with different information. You should assume that the information in this prospectus, any accompanying prospectus supplement or any document incorporated by reference is accurate as of any date other than the date of such document.

FORWARD-LOOKING INFORMATION

Some of the statements contained (i) in this prospectus and any accompanying prospectus supplement or (ii) incorporated by reference into this prospectus are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and are subject to the safe harbor created by the Securities Litigation Reform Act of 1995. Examples of these forward-looking statements include, but are not limited to:

our anticipated future capital requirements and the terms of any capital financing agreements;

having available funding for the continued development of Proellex® and Androxal®;

timing and amount of future contractual payments, product revenue and operating expenses;

the removal of the current partial clinical hold on further clinical trials for Proellex® by the Food and Drug Administration, or FDA;

uncertainty related to our ability to obtain approval of our products by the FDA and regulatory bodies in other jurisdictions;

uncertainty relating to our patent portfolio;

market acceptance of our products and the estimated potential size of these markets;

dependence on third parties for clinical development and manufacturing;

dependence on a limited number of key employees;

competition and risk of competitive new products;

continued listing on the Nasdaq Capital Market;

volatility in the value of our common stock;

volatility in the financial markets generally; and

any other risks and uncertainties described in the Company's filings with the Securities and Exchange Commission.

While these forward-looking statements made by us are based on our current intent, beliefs and judgments, they are subject to risks and uncertainties that could cause actual results to vary from the projections in the forward-looking statements. You should consider the risks below carefully in addition

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to other information contained in this report before engaging in any transaction involving our securities. If any of these risks occur, they could seriously harm our business, financial condition or results of operations. In such case, the trading price of our securities could decline, and you may lose all or part of your investment.

In addition, in this prospectus, any prospectus supplement and the documents incorporated by reference into this prospectus, the words "believe," "should," "predict," "future," "may," "will," "estimate," "continue," "anticipate," "intend," "plan," "expect," "potential," "continue," or "opportunity," or other words and terms of similar meaning, as they relate to us, our business, future financial or operating performance or our management, are intended to identify forward-looking statements. Any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update or revise 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. Past financial or operating performance is not necessarily a reliable indicator of future performance and you should not use our historical performance to anticipate results or future period trends.

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SUMMARY

This is only a summary and does not contain all of the information that you should consider before investing in our common stock. You should read the entire prospectus carefully, including the "Risk Factors" section and the information incorporated by reference from our other filings with the SEC.

General

Repros Therapeutics Inc. (the "Company," "Repros," or "we," "us" or "our") was organized on August 20, 1987. We are a development stage biopharmaceutical company focused on the development of new drugs to treat hormonal and reproductive system disorders. Both of our product candidates have exhibited strong efficacy results in every study completed to date, and we believe the studies presently underway or scheduled to start in 2012 will place both programs on a clear late stage clinical development path.

We are developing Androxal®, an oral therapy that normalizes testicular function, for the treatment of low testosterone due to secondary hypogonadism. Secondary hypogonadism is associated with obesity and we believe it is among the most common causes of low testosterone in men. It is estimated that 13 million men in the U.S. experience low levels of testosterone, and the condition is becoming recognized with more frequency. As of 2010, sales of preparations for the treatment of low testosterone have exceeded \$1 billion in the U.S. and first tier pharmaceutical companies have entered the low testosterone marketplace.

We believe Androxal® is highly differentiated from currently marketed testosterone treatments or those treatments in late stage development because it is an oral therapy and it treats the cause of secondary hypogonadism, which is inadequate pituitary hormones. We believe that by treating the cause of secondary hypogonadism, Androxal® also has the potential to maintain reproductive status and potentially improve overall metabolic profiles.

In December 2011, we completed a Phase 2B study of Androxal® in men with secondary hypogonadism, but naïve to testosterone treatment, at the Food and Drug Administration's (the "FDA") recommendation. Top line results of this study demonstrated that Androxal® was generally well tolerated compared to placebo and that there were no drug related serious adverse events that led to discontinuation. We met with the FDA in May 2012 to discuss the design of pivotal Phase 3 efficacy studies for Androxal® as well as the components of the overall drug development program required for a New Drug Application ("NDA") submission. During this meeting, we agreed upon registration requirements for Androxal® oral therapy for the treatment of secondary hypogonadism. On July 9, 2012, we announced that we reached an agreement with the FDA for the design of the pivotal efficacy studies for Androxal® for the treatment of secondary hypogonadism. The two identical Phase 3 pivotal studies are being conducted under a Special Protocol Assessment ("SPA") and enrollment is currently underway for the first Phase 3 study with enrollment for the second Phase 3 study to begin upon full enrollment of the first study. The FDA has agreed that we may conduct both Phase 3 pivotal studies at the same clinical sites as long as the two studies have a distinct principal investigator. Additionally, we began enrolling men into a 500 subject open label safety study in June 2012 and, as of mid-September 2012, have 158 men enrolled in this study. The Company has also begun enrolling men into a one year dual-energy X ray absorptiometry ("DEXA") study in the third quarter of 2012. Depending on study enrollment and the completion of other studies, we believe we may be able to submit an NDA in the first half of 2014.

We are also developing Proellex®, an orally administered selective blocker of the progesterone receptor in women, for the treatment of uterine fibroids and endometriosis. Uterine fibroids and endometriosis affect millions of women of reproductive age. Proellex® has shown statistically significant results in previous Phase 2 studies for endometriosis and uterine fibroids. We completed a low dose escalating study as permitted by the FDA in late 2011, to determine both signals of efficacy and safety

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for low oral doses of the drug. There was no evidence of elevations of liver enzymes over baseline, suggesting these lower doses avoid the type of adverse events seen at much higher doses in earlier studies. On October 8, we announced that the FDA has agreed to a reclassification of the full clinical hold to a partial clinical hold on the low dose oral Proellex® to allow us to conduct a Phase 2 study in the treatment of endometriosis. We intend to commence a Phase 2 low dose oral administration study for endometriosis in the fourth quarter of 2012.

The FDA has accepted an Investigational New Drug Application ("IND") for vaginally delivered Proellex® and, as a result, we commenced a Phase 2 vaginal administration study for uterine fibroids in the first quarter of 2012. At the end of July 2012, we satisfied our enrollment requirement of subjects for the Phase 2 study and intend to report the results around the end of 2012. We will then request an end of Phase 2 meeting with the FDA, so that we can commence a Phase 3 vaginal administration study for uterine fibroids in the first quarter of 2013. Additionally, we have begun enrolling subjects who completed the Phase 2 study into a one year open label safety trial in order to begin collecting long term safety data which we expect the FDA to require in connection with the submission of an NDA.

As of June 30, 2012, we had accumulated losses of \$197.3 million, approximately \$9.9 million in cash and cash equivalents, and our accounts payable and accrued expenses were approximately \$1.4 million.

Our offices are located at 2408 Timberloch Place, Suite B-7, The Woodlands, Texas 77380. Our phone number is (281) 719-3400 and our website is located at www.reprosr.com. Information contained on our website is not part of this prospectus.

Recent Developments

On September 7, 2012, we completed a private placement of 2,145,636 shares of our common stock. Net proceeds to us, after deducting offering expenses, were \$23.1 million. We anticipate that our current liquidity will be sufficient through the middle of 2014 for completing the necessary clinical studies required for the submission of an NDA for Androxal®, move Proellex® into Phase 3 and general corporate purposes. We continue to explore potential additional financing alternatives (including corporate partnering opportunities); however, there can be no assurance that we will be successful in raising any such additional funds on a timely basis or at all.

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RISK FACTORS

An investment in the securities offered by this prospectus involves a high degree of risk. You should consider carefully the following risk factors in addition to the other information contained in this prospectus before making a decision to invest in our common stock.

Risks Relating to Our Business

Our ability to continue our development efforts as planned require that we raise additional funds no later than the middle of 2014, without which we may need to cease our business operations and begin liquidation proceedings.

Based upon the successful completion of our recent financing and our current expense and revenue assumptions, we anticipate that we will need to obtain additional financing no later than the middle of 2014. If our expenses are greater than expected or our clinical trials take longer than expected, we may be required to raise additional funds prior to that time. We will continue to explore various financing alternatives to address our liquidity needs. No assurance can be given that we will be successful in obtaining additional financing on acceptable terms or at all. We anticipate that if we are able to secure additional financing, that such financing will result in significant dilution of the ownership interests of our stockholders and may provide certain rights to the new investors senior to the rights of our current stockholders, including but not limited to, voting rights and rights to proceeds in the event of a sale or liquidation of the Company. We expect to continue to incur significant losses for the foreseeable future, and we may never achieve or sustain profitability. In the event that we are unable to obtain adequate financing to conduct operations, we may need to cease our business operations and begin liquidation proceedings. If we need to liquidate our assets, we would likely realize significantly less from them than the values at which they are carried on our financial statements. The funds resulting from the liquidation of our assets would be used first to pay off the debt owed to any secured and unsecured creditors before any funds would be available to pay our stockholders, and any shortfall in the proceeds would directly reduce the amounts available for distribution, if any, to our creditors and to our stockholders. In the event we were required to liquidate, it is highly unlikely that stockholders would receive any value for their shares.

If we fail to obtain the capital necessary to fund our operations, we may have to delay, reduce or eliminate our research and development programs or commercialization efforts, dispose of assets or liquidate.

We expect to make additional capital outlays and to increase operating expenditures over the next several years to support our preclinical development and clinical trial activities, particularly with respect to clinical trials for Androxal® and Proellex®. Based on our current and planned clinical programs, we expect to need to raise additional capital no later than the middle of 2014 or earlier if our expenses are greater than anticipated. We will continue to seek additional funding through public or private financings, including equity or debt financings, and/or through other means, including collaborations and license agreements. We do not know whether additional financing will be available when needed, or that, if available, we will obtain financing on terms favorable to our stockholders or us. In recent years, the general economic and capital market conditions in the United States have deteriorated significantly and have increased the cost of capital, and there is no certainty that a recovery in the capital and credit markets, enabling us to raise capital in an amount to sufficiently fund our long-term plans, will occur in 2012 or beyond. If these economic conditions continue or become worse, our future cost of equity or debt capital and access to the capital markets could be adversely affected. If we cannot raise adequate funds, we may be required to:

delay, reduce the scope of or eliminate one or more of our development programs;

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relinquish, license or otherwise dispose of rights to technologies, product candidates or products that we would otherwise seek to develop or commercialize ourselves at an earlier stage or on terms that are less favorable than might otherwise be available; or

liquidate and dissolve our company.

Our future capital requirements will depend upon a number of factors, including:

the size, complexity, results and timing of our clinical programs;

the cost to obtain sufficient supply of the compounds necessary for our product candidates at a reasonable cost;

the time and cost involved in obtaining regulatory approvals;

the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims; and

competing technological and market developments.

These factors could result in variations from our currently projected operating and liquidity requirements.

Because the data from our preclinical studies and early clinical trials for our product candidates are not necessarily predictive of future results, we can provide no assurances that any of them will have favorable results in clinical trials or receive regulatory approval.

Before we can obtain regulatory approval for the commercial sale of any product candidate that we develop, we are required to complete preclinical development and extensive clinical trials in humans to demonstrate its safety and efficacy. To date, long-term safety and efficacy have not been demonstrated in clinical trials for any of our product candidates and, in fact, our product candidate Proellex® is currently on partial clinical hold with the FDA due to safety issues experienced in our earlier Phase 2 and Phase 3 clinical trials for endometriosis and uterine fibroids, respectively.

In addition, previous clinical trials for Androxal® have been conducted only in limited numbers of patients that may not fully represent the diversity present in larger populations. In addition, these studies have not been subjected to the exacting design requirements typically required by FDA for pivotal trials. Thus the limited data we have obtained may not predict results from studies in larger numbers of patients drawn from more diverse populations, and may not predict the ability of Androxal® to treat testosterone deficiency. We will be required to demonstrate through larger-scale clinical trials that these product candidates are safe and effective for use in a diverse population before we can seek regulatory approvals for their commercial sale.

Favorable results in our early studies or trials may not be repeated in later studies or trials, including continuing preclinical studies and large-scale clinical trials analyzed with more rigorous statistical methods, and our drug candidates in later-stage trials may fail to show desired safety and efficacy despite having progressed through earlier-stage trials. Unfavorable results from ongoing preclinical studies or clinical trials could result in delays, modifications or abandonment of ongoing or future clinical trials. Clinical results are frequently susceptible to varying interpretations that may delay, limit or prevent regulatory approvals. Negative or inconclusive results or adverse medical events during a clinical trial could cause a clinical trial to be delayed, repeated or terminated. In addition, we may report top-line data from time to time, which is based on a preliminary analysis of key efficacy and safety data; such data may be subject to change following a more comprehensive review of the data related to the applicable clinical trial. If Androxal®, Proellex®, or any other potential future product candidate fails to demonstrate sufficient safety and efficacy in any clinical trial, we would experience potentially significant delays in, or be required to abandon, development of that product candidate. If

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we delay or abandon our development efforts related to Androxal® or Proellex®, we may not be able to generate sufficient revenues or raise the additional capital necessary to continue operations or become profitable.

We have a history of operating losses, and we expect to incur increasing net losses and may not achieve or maintain profitability for some time or at all.

We have experienced significant operating losses in each fiscal year since our inception. As of June 30, 2012, we had accumulated losses of \$197.3 million, approximately \$9.9 million in cash and cash equivalents, and our accounts payable and accrued expenses were approximately \$1.4 million. On September 7, 2012, we completed a private placement of 2,145,636 shares of our common stock, which resulted in net proceeds to us, after deducting operating expenses, of \$23.1 million. As a result we believe we have sufficient cash to continue our clinical trials through the middle of 2014.

We expect to continue incurring net losses and we may not achieve or maintain profitability for some time if at all. As we increase expenditures for the clinical development of our products, we expect our total operating losses to increase for at least the next few years. Our ability to achieve profitability will depend on, among other things, successfully completing the development of our products, obtaining regulatory approvals, establishing marketing, sales and manufacturing capabilities or collaborative arrangements with others that possess such capabilities, and raising sufficient funds to finance our activities. There can be no assurance that we will be able to achieve profitability or that profitability, if achieved, can be sustained.

Raising additional funds by issuing securities or through collaboration and licensing arrangements may cause dilution to our stockholders, restrict our operations or require us to relinquish proprietary rights.

We may raise additional funds through public or private equity offerings, debt financings or potential corporate collaborations and licensing arrangements. We cannot be certain that additional funding will be available on acceptable terms, or at all. To the extent that we raise additional capital by issuing equity securities, our stockholders' ownership will be diluted. Any debt financing we enter into may involve covenants that restrict our operations. These restrictive covenants may include limitations on borrowing and specific restrictions on the use of our assets, as well as prohibitions on our ability to create liens, pay dividends, redeem capital stock or make investments. In addition, if we raise additional funds through collaboration and licensing arrangements, it may be necessary to relinquish potentially valuable rights to our potential products or proprietary technologies, or grant licenses on terms that are not favorable to us. For example, we might be forced to relinquish all or a portion of our sales and marketing rights with respect to Androxal®, Proellex®, or other potential products or license intellectual property that enables licensees to develop competing products.

Our stock price could decline significantly based on the results and timing of clinical trials of, and decisions affecting, our product candidates.

Results of clinical trials and preclinical studies of our current and potential product candidates may not be viewed favorably by us or third parties, including the FDA or other regulatory authorities, investors, analysts and potential collaborators. The same may be true of how we design the clinical trials of our product candidates and regulatory decisions affecting those clinical trials. Biopharmaceutical company stock prices have declined significantly when such results and decisions were unfavorable or perceived negatively or when a product candidate did not otherwise meet expectations. The final results from our clinical development programs may be negative, may not meet expectations or may be perceived negatively. The designs of our clinical trials (which may change significantly and be more expensive than currently anticipated depending on our clinical results and regulatory decisions) may also be viewed negatively by third parties. We may not be successful in completing these clinical trials on our projected timetable, if at all.

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Failure to initiate additional clinical trials or delays in existing clinical trials of Androxal® and Proellex®, and failure of the FDA to lift the partial clinical hold on Proellex®, or unfavorable results or decisions or negative perceptions regarding any of such clinical trials, could cause our stock price to decline significantly.

We are thinly staffed and highly dependent on a limited number of management persons and key personnel, and if we lose these members of our team or are unable to attract and retain additional qualified personnel, our future growth and ability to compete would suffer.

The competition for qualified personnel in the biopharmaceutical field is intense, and our future success depends upon our ability to attract, retain and motivate highly skilled scientific, technical and managerial employees. We had only 18 full-time employees at June 30, 2012, including our President and Chief Executive Officer, Joseph S. Podolski. We are highly dependent on Mr. Podolski and our professional staff for the management of our company and the development of our technologies. Mr. Podolski has an employment agreement with us. There can be no assurance that any of these employees will remain with us through development of our current product candidates. The loss of the services of any of our employees could delay or curtail our research and product development efforts.

Our plan to use collaborations to leverage our capabilities may not be successful.

As part of our business strategy, we may enter into collaboration arrangements with strategic partners to develop and commercialize our product candidates. For our collaboration efforts to be successful, we must identify partners whose competencies complement ours. We must also successfully enter into collaboration agreements with them on terms attractive to us and integrate and coordinate their resources and capabilities with our own. We may be unsuccessful in entering into collaboration agreements with acceptable partners or negotiating favorable terms in these agreements. In addition, we may face a disadvantage in seeking to enter into or negotiating collaborations with potential partners because other potential collaborators may have greater management and financial resources than we do. Also, we may be unsuccessful in integrating the resources or capabilities of these collaborators. In addition, our collaborators may prove difficult to work with or less skilled than we originally expected. If we are unsuccessful in our collaborative efforts, our ability to develop and market product candidates could be severely limited.

Risks Relating to Our Product Development Efforts

Changes in existing regulations and the adoption of new regulations may increase our costs and otherwise adversely affect our business, results of operations and financial condition.

Our research and development activities, preclinical studies and clinical trials, and the manufacturing, marketing and labeling of any products we may develop, are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries. Additional government regulation may be established that could prevent or delay regulatory approval of our product candidates or materially increase our costs. Delays in obtaining or rejections of regulatory approvals would adversely affect our ability to commercialize any product candidate we develop and our ability to receive product revenues or to receive milestone payments or royalties from any product rights we might license to others. If regulatory approval of a product candidate is granted, the approval may include significant limitations on the indicated uses for which the product may be marketed or may be conditioned on the conduct of post-marketing surveillance studies.

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Delays in the commencement of preclinical studies and clinical trials testing of our current and potential product candidates could result in increased costs to us and delay our ability to generate revenues.

Our product candidates will require continued preclinical studies and extensive clinical trials prior to the submission of a regulatory application for commercial sales. Because of the nature of clinical trials and our lack of sufficient capital, we do not know whether future planned clinical trials will begin on time, if at all. Delays in the commencement of preclinical studies and clinical trials could significantly increase our product development costs and delay any product commercialization. In addition, many of the factors that may cause, or lead to, a delay in the commencement of clinical trials may also ultimately lead to denial of regulatory approval of a product candidate.

The commencement of clinical trials can be delayed for a variety of reasons, including delays or failures in:

demonstrating sufficient safety and efficacy in past clinical trials to obtain regulatory approval to commence a further clinical trial;

convincing the FDA that we have selected valid endpoints for use in proposed clinical trials;

reaching agreements on acceptable terms with prospective contract manufacturers for manufacturing sufficient quantities of a product candidate; and

obtaining institutional review board approval to conduct a clinical trial at a prospective site.

In addition, the commencement of clinical trials may be delayed due to insufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease, and the eligibility criteria for the clinical trial.

Delays in the completion of, or the termination of, clinical testing of our current and potential product candidates could result in increased costs to us, and could delay or prevent us from generating revenues.

Once a clinical trial has begun, it may be delayed, suspended or terminated by us or the FDA or other regulatory authorities due to a number of factors, including:

lack of adequate funding to continue clinical trials;

lack of effectiveness of any product candidate during clinical trials;

side effects experienced by trial participants or other safety issues;

slower than expected rates of patient recruitment and enrollment or lower than expected patient retention rates;

delays or inability to manufacture or obtain sufficient quantities of materials for use in clinical trials;

inadequacy of or changes in our manufacturing process or compound formulation;

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delays in obtaining regulatory approvals to commence a trial, or "clinical holds" or delays requiring suspension or termination of a trial by a regulatory agency, such as the FDA, after a trial is commenced;

changes in applicable regulatory policies and regulations;

delays in identifying and reaching agreement on acceptable terms with prospective clinical trial sites;

uncertainty regarding proper dosing;

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unfavorable results from on-going clinical trials and preclinical studies;

failure of our clinical research organizations to comply with all regulatory and contractual requirements or otherwise fail to perform their services in a timely or acceptable manner;

scheduling conflicts with participating clinicians and clinical institutions;

failure to construct appropriate clinical trial protocols;

insufficient data to support regulatory approval;

inability or unwillingness of medical investigators to follow our clinical protocols;

difficulty in maintaining contact with subjects during or after treatment, which may result in incomplete data;

the timing of discussions and meetings with the FDA or other regulatory authorities regarding the scope or design of our clinical trials; and

acceptability to the FDA of data obtained from clinical studies conducted in Europe or other non-United States jurisdictions.

Many of these factors that may lead to a delay, suspension or termination of clinical testing of a current or potential product candidate may also ultimately lead to denial of regulatory approval of a current or potential product candidate. In fact, the FDA placed Proellex® on clinical hold in summer 2009 due to liver toxicity data resulting from our clinical trials. Though the full clinical hold has been upgraded to a partial clinical hold, there can be no assurance that the partial hold will be lifted at any time.

If we experience delays in the completion of, or termination of, clinical testing of any product candidates in the future, our financial results and the commercial prospects for our product candidates will be harmed, and our ability to generate product revenues will be delayed.

Even if we successfully complete clinical trials for Androxal® and Proellex®, there are no assurances that we will be able to submit, or obtain FDA approval of, a new drug application.

There can be no assurance that, if our clinical trials for Androxal® and Proellex® are successfully completed, we will be able to submit an NDA to the FDA or that any NDA we submit will be approved by the FDA in a timely manner, if at all. After completing clinical trials for a product candidate in humans, a drug dossier is prepared and submitted to the FDA as an NDA, and includes all preclinical studies and clinical trial data relevant to the safety and effectiveness of the product at the suggested dose and duration of use for the proposed indication, in order to allow the FDA to review such drug dossier and to consider a product candidate for approval for commercialization in the United States. If we are unable to submit an NDA with respect to Androxal® or Proellex®, or if any NDA we submit is not approved by the FDA, we will be unable to commercialize that product. The FDA can and does reject NDAs and requires additional clinical trials, even when drug candidates achieve favorable results in large-scale Phase 3 clinical trials. If we fail to commercialize Androxal® or Proellex®, we may be unable to generate sufficient revenues to continue operations or attain profitability and our reputation in the industry and in the investment community would likely be damaged.

We rely on third parties to conduct clinical trials for our product candidates, and their failure to timely and properly perform their obligations may result in costs and delays that prevent us from obtaining regulatory approval or successfully commercializing our product candidates.

We rely on independent contractors, including researchers at clinical research organizations ("CROs"), and universities, in certain areas that are particularly relevant to our research and product

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development plans, such as for data management for the *conduct of clinical trials*. *The competition for these relationships is intense, and we may not be able to maintain our relationships with them on acceptable terms.* Independent contractors generally may terminate their engagements at any time, subject to notice. As a result, we can control their activities only within certain limits, and they will devote only a certain amount of their time conducting research on and trials of our product candidates and assisting in developing them. If they do not successfully carry out their duties under their agreements with us, fail to inform us if these trials fail to comply with clinical trial protocols, or fail to meet expected deadlines, our clinical trials may need to be extended, delayed or terminated. We may not be able to enter into replacement arrangements without undue delays or excessive expenditures. If there are delays in testing or regulatory approvals as a result of the failure to perform by our independent contractors or other outside parties, our drug development costs will increase and we may not be able to attain regulatory approval for or successfully commercialize our product candidates.

In addition, we have no control over the financial health of our independent contractors. Several of our independent contractors are in possession of valuable and sensitive information relating to the safety and efficacy of our product candidates, and several others provide services to a significant percentage of the patients enrolled in the respective clinical trials in which such independent contractors participate. Should one or more of these independent contractors become insolvent, or otherwise are not able to continue to provide services to us, as a result of the current economic downturn or otherwise, the clinical trial in which such contractor participates could become significantly delayed and we may be adversely affected as a result of the delays and additional expenses associated with such event.

The risk of accidental contamination or injury resulting from our handling and disposing of hazardous materials and chemicals may expose us to litigation.

Our research and development involves the controlled use of hazardous materials and chemicals. Although we believe that our procedures for handling and disposing of those materials comply with state and federal regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If such an accident occurs, we could be held liable for resulting damages, which could have a material adverse effect on us.

Risks Relating to Manufacturing Our Products

We currently rely on third-party manufacturers and other third parties for production of our product candidates, and our dependence on these manufacturers may impair the development of our product candidates.

Currently, we do not have the ability internally to manufacture the product candidates that we need to conduct our clinical trials. We terminated our supply agreement with Gedeon Richter for the manufacturing of Proellex® due to the clinical hold imposed by the FDA in August 2009; however, we have a large supply of Proellex® currently available for our current and planned clinical trial efforts. In the event we require an additional supply of Proellex®, we believe that we have maintained a good relationship with Gedeon Richter and that an agreement could be reached with Gedeon Richter to provide such supply when and if needed, but we cannot assure you this will be the case.

We have a supply agreement with Diagnostic Chemical Limited, doing business as BioVectra, for the supply of the bulk active pharmaceutical ingredient used in Androxal®. This agreement runs through July of 2013, subject to automatic one year renewals and the ability of either party to terminate upon 12 months prior notice. We have obtained all of our supply of Androxal® to date from BioVectra. We have not faced any material problems with BioVectra in supplying us with our necessary quantities of Androxal® for our clinical trials and anticipate utilizing them for commercial production if

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Androxal® is approved. The Company believes that should an issue with BioVectra arise an alternative supplier could be identified, but we cannot assure you this will be the case.

For the foreseeable future, we expect to continue to rely on third-party manufacturers and other third parties to produce, package and store sufficient quantities of Androxal®, Proellex®, and any future product candidates for use in our clinical trials. These product candidates are complicated and expensive to manufacture. If our third-party manufacturers fail to deliver our product candidates for clinical use on a timely basis, with sufficient quality, and at commercially reasonable prices, we may be required to delay or suspend clinical trials or otherwise discontinue development and production of our product candidates. While we may be able to identify replacement third-party manufacturers or develop our own manufacturing capabilities for these product candidates, this process would likely cause a delay in the availability of our product candidates and an increase in costs. In addition, third-party manufacturers may have a limited number of facilities in which our product candidates can be produced, and any interruption of the operation of those facilities due to events such as equipment malfunction or failure or damage to the facility by natural disasters could result in the cancellation of shipments, loss of product in the manufacturing process or a shortfall in available product candidates.

Identification of previously unknown problems with respect to a product, manufacturer or facility may result in restrictions on the product, manufacturer or facility.

The FDA stringently applies regulatory standards for the manufacturing of our products. Identification of previously unknown problems with respect to a product, manufacturer or facility may result in restrictions on the product, manufacturer or facility, including warning letters, suspensions of regulatory approvals, operating restrictions, delays in obtaining new product approvals, withdrawal of the product from the market, product recalls, fines, injunctions and criminal prosecution. Any of the foregoing could have a material adverse effect on us.

Our product candidates have only been manufactured in small quantities to date, and we may face delays or complications in manufacturing quantities of our product candidates in sufficient quantities to meet the demands of late stage clinical trials and marketing.

We cannot assure that we will be able to successfully increase the manufacturing capacity or scale-up manufacturing volume per batch, whether on our own or in reliance on third-party manufacturers, for any of our product candidates in a timely or economical manner, or at all. To date our product candidates have been manufactured exclusively by third parties in small quantities for preclinical studies and clinical trials. Future clinical trials of our product candidates, if any, will require increased quantities for future commercial sales in the event that such product candidates are approved by the FDA or foreign regulatory bodies. Significant scale-up of manufacturing requires certain additional developmental work, which the FDA must review and approve to assure product comparability. If we or our third-party manufacturers are unable to successfully increase the manufacturing capacity for a product candidate, the regulatory approval or commercial launch of that product candidate may be delayed or there may be a shortage in supply of that product candidate.

Our product candidates require precise, high-quality manufacturing which may not be available at acceptable costs.

Androxal® and Proellex® are novel compounds that have never been produced in large scale. As in the development of any new compound, there are underlying risks associated with their manufacture. These risks include, but are not limited to, cost, process scale-up, process reproducibility, construction of a suitable process plant, timely availability of raw materials, as well as regulatory issues associated with the manufacture of an active pharmaceutical agent. Any of these risks may prevent us from successfully developing Androxal® or Proellex®. Our failure, or the failure of our third-party manufacturers to achieve and maintain these high manufacturing standards, including the incidence of manufacturing errors and reliable product packaging for diverse environmental conditions, could result in patient injury or death, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could seriously hurt our business.

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We may experience delays in the development of our product candidates if the third-party manufacturers of our product candidates cannot meet FDA requirements relating to Good Manufacturing Practices.

Our third-party manufacturers are required to produce our product candidates under FDA current Good Manufacturing Practices in order to meet acceptable standards for our clinical trials. If such standards change, the ability of third-party manufacturers to produce our product candidates on the schedule we require for our clinical trials may be affected. In addition, third-party manufacturers may not perform their obligations under their agreements with us or may discontinue their business before the time required by us to gain approval for or commercialize our product candidates. Any difficulties or delays in the manufacturing and supply of our product candidates could increase our costs or cause us to lose revenue or postpone or cancel clinical trials.

The FDA also requires that we demonstrate structural and functional comparability between the same drug product produced by different third-party manufacturers. Because we may use multiple sources to manufacture Androxal® and Proellex®, we may need to conduct comparability studies to assess whether manufacturing changes have affected the product safety, identity, purity or potency of any commercial product candidate compared to the product candidate used in clinical trials. If we are unable to demonstrate comparability, the FDA could require us to conduct additional clinical trials, which would be expensive and significantly delay commercialization of our product candidates.

Risks Relating to Product Commercialization

If commercialized, our product candidates may not be approved for sufficient governmental or third-party reimbursements, which would adversely affect our ability to market our product candidates.

In the United States and elsewhere, sales of pharmaceutical products depend in significant part on the availability of reimbursement to the consumer from third-party payers, such as government and private insurance plans. Third-party payers are increasingly challenging the prices charged for medical products and services. It will be time consuming and expensive for us to go through the process of seeking reimbursement from Medicaid, Medicare and private payers for Proellex® and Androxal®. Our products may not be considered cost effective, and coverage and reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis. The passage of the Medicare Prescription Drug and Modernization Act of 2003 imposes requirements for the distribution and pricing of prescription drugs, which may negatively affect the marketing of our potential products.

If we successfully develop products but those products do not achieve and maintain market acceptance, our business will not be profitable.

Even if our product candidates are approved for commercial sale by the FDA or other regulatory authorities, the degree of market acceptance of any approved product by physicians, healthcare professionals and third-party payers and our profitability and growth will depend on a number of factors, including:

relative convenience and ease of administration;

the prevalence and severity of any adverse side effects;

availability, effectiveness and cost of alternative treatments;

pricing and cost effectiveness of our drugs;

effectiveness of our or collaborators' sales and marketing strategies; and

our ability to obtain sufficient third-party insurance coverage or reimbursement.

If Androxal® does not provide a treatment regime that is more beneficial than AndroGel®, the current standard of care for the treatment of testosterone deficiency, or otherwise provide patient

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benefit, it likely will not be accepted favorably by the market. If any products we may develop do not achieve market acceptance, then we will not generate sufficient revenue to achieve or maintain profitability.

In addition, even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if:

new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete;

unforeseen complications arise with respect to use of our products; or

sufficient third-party insurance coverage or reimbursement does not remain available.

In many foreign markets, including the countries in the European Union, pricing of pharmaceutical products is subject to governmental control. In the United States, there have been, and we expect that there will continue to be, a number of federal and state proposals to implement similar governmental pricing controls. While we cannot predict whether such legislative or regulatory proposals will be adopted, the adoption of such proposals could have a material adverse effect on our profitability.

Our liability insurance may neither provide adequate coverage nor may it always be available on favorable terms or at all.

Neither Androxal® nor Proellex® has been approved for commercial sale. However, the current and future use of our product candidates by us and potential corporate collaborators in clinical trials, and the sale of any approved products in the future, may expose us to liability claims. These claims might be made directly by consumers or healthcare providers or indirectly by pharmaceutical companies, potential corporate collaborators or others selling such products. We may experience financial losses in the future due to product liability claims. We have obtained limited general commercial liability insurance coverage for our clinical trials. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for any of our product candidates. However, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or for liabilities in excess of our insurance limits, our assets may not be sufficient to cover such claims and our business operations could be impaired.

We face significant competition from many companies with substantially greater resources than we have and other possible advantages.

We are engaged in biopharmaceutical product development, an industry that is characterized by extensive research efforts and rapid technological progress. The biopharmaceutical industry is also highly competitive. Our success will depend on our ability to acquire, develop and commercialize products and our ability to establish and maintain markets for any products for which we receive marketing approval. Potential competitors in North America, Europe and elsewhere include major pharmaceutical companies, specialty pharmaceutical companies and biotechnology firms, universities and other research institutions and government agencies. Many of our competitors have substantially greater research and development and regulatory capabilities and experience, and substantially greater management, manufacturing, distribution, marketing and financial resources, than we do. Accordingly, our competitors may:

develop or license products or other novel technologies that are more effective, safer or less costly than the product candidates that we are developing;

obtain regulatory approval for products before we do; or

commit more resources than we can to developing, marketing and selling competing products.

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Our main competitors for the treatment of testosterone deficiency are the testosterone replacement therapies currently being marketed. The current standard of care is AndroGel®, a topical gel for the replacement of testosterone developed by Solvay Pharmaceuticals (which was acquired by Abbott Laboratories). Abbott is a much larger company than we are, with greater resources and marketing ability. Androxal® would also compete with other forms of testosterone replacement therapies such as oral treatments, patches, injectables and a tablet applied to the upper gum. There is another topical gel currently marketed by Auxilium Pharmaceuticals called Testim®, and a transdermal patch marketed by Watson Pharmaceuticals called AndroDerm®. Eli Lilly and Company also entered into a licensing agreement with a third party for a late stage topical testosterone treatment called Axiron®, which has recently become available in pharmacies. There can be no assurance that our product candidates will be more successful than competitive products. In addition, other potential competitors may be developing testosterone therapies similar to ours.

The main therapeutic products competitive with Proellex® for the treatment of uterine fibroids and endometriosis are GnRH agonists, including Lupron® and the use of approved progestin-based contraceptives for the treatment of endometriosis. In addition, surgical treatment of both uterine fibroids and endometriosis would compete with Proellex®, if approved, by removing uterine fibroids and by removing misplaced tissue in women with endometriosis. Furthermore, Abbott has recently licensed a Phase 3-ready molecule from Neurocrine Biosciences Inc. for the treatment of endometriosis. Gedeon Richter and Watson Pharmaceuticals have also entered into an exclusive license agreement to develop and market Esmya (an orally selective progesterone receptor modulator) in the U.S. and Canada.

Risks Relating to Our Intellectual Property

There is a third party individual patent holder that claims priority over our patent application for Androxal®.

A third party individual holds two issued patents related to the use of an anti-estrogen such as clomiphene citrate and others for use in the treatment of androgen deficiency and disorders related thereto. We requested re-examination of one of these patents by the U.S. Patent and Trademark Office ("PTO") based on prior art. The patent holder amended the claims in the re-examination proceedings, which led the PTO to determine that the amended claims were patentable in view of those publications under consideration and a re-examination certificate was issued. We subsequently filed a second request for re-examination by the PTO in light of a number of additional publications. The request was granted and all of the claims were finally rejected by the PTO in the re-examination. The patent holder appealed the rejections to the PTO Board of Patent Appeals and Interferences (the "PTO Board") which ultimately reversed the rejections of several dependent claims in view of those publications under consideration. The patent holder filed a Notice of Appeal to the Federal Circuit on September 28, 2010 contesting the rejections maintained by the PTO Board. A decision was rendered by the Federal Circuit on December 12, 2011, affirming the rejection of the appealed claims. We expect that a re-examination certificate will be issued confirming the patentability of the remaining claims; however, if such a re-examination certificate were to issue, we believe that our development of Androxal® would not infringe any of the remaining claims and that all of the remaining claims are invalid on various grounds including additional prior art publications. We also believe that the second of these two patents is invalid in view of published prior art not considered by the PTO. If necessary, we intend to vigorously defend any and all claims, against the holder of such patents in a court of competent jurisdiction in order to develop Androxal® further. Adverse determinations in litigation proceedings could require us to seek licenses which may not be available on commercially reasonable terms, or at all, or subject us to significant liabilities, in which case we may not be able to successfully commercialize or out-license Androxal® until such patents expire or are otherwise no longer in force.

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We licensed our rights to Proellex® from the NIH and our inability to fulfill our commitments and obligations under such license may result in forfeiture of our rights.

Our rights to Proellex® are licensed exclusively to us from the NIH under a license agreement. This license agreement contains numerous detailed performance obligations, with time sensitive dates for compliance, relating to clinical development and commercialization activities required by us or our designated third-party providers, as well as additional financial milestones and royalties. Failure to achieve the benchmarks specified in the commercial development plan attached to the license agreement or meet payment obligations could result in termination of the license agreement and the loss of our rights to develop and commercialize Proellex®. We periodically update the commercial development plan as such plans evolve. There can be no assurance that we will be able to meet any or all of the performance objectives in the future on a timely basis or at all, or that, if we fail to meet any of such objectives, the NIH will agree to revised objectives. The NIH also has the ability to terminate the agreement for an uncured material breach of the agreement, if we do not keep Proellex® reasonably available to the public after commercial launch or if we cannot reasonably satisfy unmet health and safety needs, among other reasons.

There can be no assurance that our manufacture, use or sale of our product candidates will not infringe on the patent rights of others.

There can be no assurance that the manufacture, use or sale of any of our product candidates will not infringe the patent rights of others. We may be unable to avoid infringement of the patent rights of others and may be required to seek a license, defend an infringement action or challenge the validity of the patents in court. There can be no assurance that a license to the allegedly infringed patents will be available to us on terms and conditions acceptable to us, if at all, or that we will prevail in any patent litigation. Patent litigation is extremely costly and time-consuming, and there can be no assurance that we will have sufficient resources to defend any possible litigation related to such infringement. If we do not obtain a license on acceptable terms under such patents, or are found liable for infringement, or are not able to have such patents declared invalid, we may be liable for significant money damages, may encounter significant delays in bringing our product candidates to market, or may be precluded from participating in the manufacture, use or sale of any such product candidates, any of which would materially and adversely affect our business.

A dispute regarding the infringement or misappropriation of our proprietary rights or the proprietary rights of others could be costly and result in delays in our research and development activities.

Our commercial success depends upon our ability to develop and manufacture our product candidates and market and sell drugs, if any, and conduct our research and development activities without infringing or misappropriating the proprietary rights of others. We may be exposed to future litigation by others based on claims that our product candidates, technologies or activities infringe the intellectual property rights of others. Numerous United States and foreign issued patents and pending patent applications owned by others also exist in the therapeutic areas in, and for the therapeutic targets for, which we are developing drugs. These could materially affect our ability to develop our product candidates or sell drugs, and our activities, or those of our licensor or future collaborators, could be determined to infringe these patents. Because patent applications can take many years to issue, there may be currently pending applications, unknown to us, which may later result in issued patents that our drug candidates or technologies may infringe. There also may be existing patents, of which we are not aware, that our product candidates or technologies may infringe. Further, there may be issued patents and pending patent applications in fields relevant to our business, of which we are or may become aware, that we believe we do not infringe or that we believe are invalid or relate to immaterial portions of our overall drug discovery and development efforts. We cannot assure you that others holding any of these patents or patent applications will not assert infringement claims against us

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for damages or seeking to enjoin our activities. We also cannot assure you that, in the event of litigation, we will be able to successfully assert any belief we may have as to non-infringement, invalidity or immateriality, or that any infringement claims will be resolved in our favor.

In addition, others may infringe or misappropriate our proprietary rights, and we may have to institute costly legal action to protect our intellectual property rights. We may not be able to afford the costs of enforcing or defending our intellectual property rights against others. There could also be significant litigation and other administrative proceedings in our industry that affect us regarding patent and other intellectual property rights. Any legal action or administrative action against us, or our collaborators, claiming damages or seeking to enjoin commercial activities relating to our drug discovery and development programs could:

require us, or potential collaborators, to obtain a license to continue to use, manufacture or market the affected drugs, methods or processes, which may not be available on commercially reasonable terms, if at all;

prevent us from importing, making, using, selling or offering to sell the subject matter claimed in patents held by others and subject us to potential liability for damages; or

consume a substantial portion of our managerial, scientific and financial resources; or be costly, regardless of the outcome.

Furthermore, because of the substantial amount of pre-trial documents and witness discovery required in connection with intellectual property litigation, there is risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the trading price of our common stock or warrants.

We face substantial uncertainty in our ability to protect our patents and proprietary technology.

Our ability to commercialize our products will depend, in part, on our or our licensor's ability to obtain patents, to enforce those patents and preserve trade secrets, and to operate without infringing on the proprietary rights of others. The patent positions of biopharmaceutical companies are highly uncertain and involve complex legal and factual questions. There can be no assurance that:

patent applications for and relating to our products candidates, Androxal® and Proellex®, will result in issued patents;

patent protection will be secured for any particular technology;

any patents that have been or may be issued to us, such as our issued patents and/or pending patent applications relating to Proellex® or Androxal®, or any patents that have been or may be issued to our licensor, such as the patent(s) and application(s) underlying our Proellex® compound, when issued, will be valid and enforceable;

any patents will provide meaningful protection to us;

others will not be able to design around the patents; or

our patents will provide a competitive advantage or have commercial application.

The failure to obtain and maintain adequate patent protection would have a material adverse effect on us and may adversely affect our ability to enter into, or affect the terms of, any arrangement for the marketing of any product.

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We cannot assure that our patents will not be challenged by others.

There can be no assurance that patents owned by or licensed to us will not be challenged by others. We could incur substantial costs in proceedings, including interference proceedings before the PTO and comparable proceedings before similar agencies in other countries in connection with any claims that may arise in the future. These proceedings could result in adverse decisions about the patentability of our or our licensor's inventions and products, as well as about the enforceability, validity or scope of protection afforded by the patents. Any adverse decisions about the patentability of our product candidates could cause us to either lose rights to develop and commercialize our product candidates or to license such rights at substantial cost to us. In addition, even if we were successful in such proceedings, the cost and delay of such proceedings would most likely have a material adverse effect on our business.

Confidentiality agreements with employees and others may not adequately prevent disclosure of trade secrets and other proprietary information, may not adequately protect our intellectual property, and will not prevent third parties from independently discovering technology similar to or in competition with our intellectual property.

We rely on trade secrets and other unpatented proprietary information in our product development activities. To the extent we rely on trade secrets and unpatented know-how to maintain our competitive technological position, there can be no assurance that others may not independently develop the same or similar technologies. We seek to protect trade secrets and proprietary knowledge, in part, through confidentiality agreements with our employees, consultants, advisors, collaborators and contractors. Nevertheless, these agreements may not effectively prevent disclosure of our confidential information and may not provide us with an adequate remedy in the event of unauthorized disclosure of such information. If our employees, scientific consultants, advisors, collaborators or contractors develop inventions or processes independently that may be applicable to our technologies, product candidates or products, disputes may arise about ownership of proprietary rights to those inventions and processes. Such inventions and processes will not necessarily become our property, but may remain the property of those persons or their employers. Protracted and costly litigation could be necessary to enforce and determine the scope of our proprietary rights. If we fail to obtain or maintain trade secret protection for any reason, the competition we face could increase, reducing our potential revenues and adversely affecting our ability to attain or maintain profitability.

We cannot protect our intellectual property rights throughout the world.

Filing, prosecuting, and defending patents on all of our drug discovery technologies and all of our potential drug candidates throughout the world would be prohibitively expensive. Competitors may use our technologies to develop their own drugs in jurisdictions where we have not obtained patent protection. These drugs may compete with our drugs, if any, and may not be covered by any of our patent claims or other intellectual property rights. The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. Many countries, including certain countries in Europe, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties (for example, the patent owner has failed to "work" the invention in that country or the third party has patented improvements). In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of the patent. Compulsory licensing of life-saving drugs is also becoming increasingly popular in developing countries either through direct legislation or international initiatives. Such compulsory licenses could be extended to include some of our drug candidates, which could limit our potential revenue opportunities. Moreover, the legal systems of certain countries, particularly certain

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developing countries, do not favor the aggressive enforcement of patents and other intellectual property protection, particularly those relating to biotechnology and/or pharmaceuticals, which makes it difficult for us to stop the infringement of our patents. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

Risks Related to our Common Stock and Warrants

Purchasers in this offering will experience immediate and substantial dilution.

As of June 30, 2012, we had a net tangible book value of \$8.8 million which yields a net tangible book value of approximately \$0.59 per share of common stock, assuming no exercise of any warrants or options. The net tangible book value per share is less than the current market price per share. If you pay more than the net tangible book value per share for common stock in this offering, you will experience immediate dilution. See the section titled "Dilution" on page 16 of this prospectus. The exercise of outstanding options and the warrants will result in further dilution in your investment. In addition, if we issue additional equity securities in the future, the newly issued securities may further dilute your ownership interest.

The trading price of our common stock has been volatile and is likely to be volatile in the future.

The trading price of our common stock has been highly volatile. Since January 1, 2011 through October 24, 2012, the sale price of our stock price has fluctuated from a low of \$2.37 to a high of \$17.00. The market price for our common stock and warrants will be affected by a number of factors, including:

the denial or delay of regulatory clearances or approvals of our drug candidates or receipt of regulatory approval of competing products;

our ability to accomplish clinical, regulatory and other product development milestones;

the ability of our product candidates, if they receive regulatory approval, to achieve market success;

the performance of third-party manufacturers and suppliers;

actual or anticipated variations in our results of operations or those of our competitors;

developments with respect to our patents and other intellectual property rights;

sales of common stock or other securities by us or our stockholders in the future;

additions or departures of key scientific or management personnel;

disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our products;

trading volume of our common stock and warrants;

investor perceptions about us and our industry;

public reaction to our press releases, other public announcements and SEC and other filings;

the failure of analysts to cover our common stock, or changes in analysts' estimates or recommendations;

the failure by us to meet analysts' projections or guidance;

general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors; and

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the other factors described elsewhere in these "Risk Factors" or the section titled "Risk Factors" contained in our other public filings.

The stock prices of many companies in the biotechnology industry have experienced wide fluctuations that have often been unrelated to the operating performance of these companies. Following periods of volatility in the market price of a company's securities, securities class action litigation often has been initiated against a company. If any class action litigation is initiated against us, we may incur substantial costs and our management's attention may be diverted from our operations, which could significantly harm our business.

Our inability to comply with the listing requirements of the Nasdaq Capital Market could result in our common stock and/or warrants being delisted, which could affect its market price and liquidity and reduce our ability to raise capital.

We are required to meet certain qualitative and financial tests (including a minimum closing bid price of \$1.00 per share for our common stock) to maintain the listing of our common stock and/or warrants on the Nasdaq Capital Market. If we do not maintain compliance with the continued listing requirements for the Nasdaq Capital Market within specified periods and subject to permitted extensions, our common stock and/or warrants may be recommended for delisting (subject to any appeal we would file). If our common stock or warrants are delisted, it could be more difficult to buy or sell our common stock and/or our warrants and to obtain accurate quotations, and the price of our common stock and/or warrants could suffer a material decline. Delisting would also impair our ability to raise capital.

The market price of our common stock may fall below the exercise price of our Series B Warrants.

The Series B Warrants are exercisable at any time at or prior to 5:00 p.m. Eastern time on February 8, 2016. The market price of our common stock may fall below the exercise price for such warrants prior to their expiration. Any Series B Warrants not exercised by such date of expiration will expire worthless and we will be under no further obligation to the holders of such warrants.

Our rights agreement and certain provisions in our charter documents and Delaware law could delay or prevent a change in management or a takeover attempt that you may consider to be in your best interest.

We have adopted certain anti-takeover provisions, including a rights agreement. The rights agreement will cause substantial dilution to any person who attempts to acquire us in a manner or on terms not approved by our board of directors.

The rights agreement and certain provisions in our certificate of incorporation and bylaws and under Delaware law could delay or prevent the removal of directors and other management and could make more difficult a merger, tender offer or proxy contest involving us that you may consider to be in your best interest. For example, these provisions:

allow our board of directors to issue preferred stock without stockholder approval;

limit who can call a special meeting of stockholders; and

establish advance notice requirements for nomination for election to the board of directors or for proposing matters to be acted upon at stockholder meetings.

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USE OF PROCEEDS

Unless the applicable prospectus supplement states otherwise, the net proceeds we receive from the sale of the securities offered by us under this prospectus will be used for general corporate purposes, including:

funding clinical trials and regulatory submissions for our two lead product candidates Proellex® and Androxal®; and

general working capital.

Until we use the net proceeds from the sale of the securities offered by us under this prospectus, we intend to invest the funds in short-term, investment grade, interest-bearing securities.

DILUTION

Our net tangible book value at December 31, 2011 and June 30, 2012 was approximately \$3.3 and \$8.8 million, respectively. Net tangible book value per share represents total assets minus capitalized patent costs and total liabilities, divided by the number of shares of common stock outstanding. If we offer shares of our common stock, purchasers of our common stock in that offering may experience immediate dilution in net tangible book value per share. The prospectus supplement relating to an offering of shares of our common stock will set forth the information regarding any dilutive effect of that offering.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock and do not currently anticipate declaring or paying cash dividends on our common stock in the foreseeable future. We currently intend to retain all of our future earnings, if any, to finance operations. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including future earnings, capital requirements, financial conditions, future prospects, contractual restrictions and other factors that our board of directors may deem relevant.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 75,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share.

As of October 24, 2012, we had 17,116,357 outstanding shares of common stock and no outstanding shares of preferred stock.

As of October 24, 2012, we had outstanding stock options to purchase 1,945,516 shares of common stock at prices ranging from \$1.33 to \$50.80.

As of October 24, 2012, we had 3,318,691 issued warrants, consisting of 1,749,270 Series A Warrants to purchase 1,749,270 shares of common stock at an exercise price of \$0.01 per share and 1,569,421 Series B Warrants to purchase 1,569,421 shares of common stock at an exercise price of \$2.49 per share, for a total of 3,318,691 shares of common stock issuable upon exercise of all such Series A and Series B Warrants.

Common Stock

Subject to any special voting rights of any series of preferred stock that we may issue in the future, each share of common stock has one vote on all matters voted on by our stockholders, including the election of our directors. Because holders of common stock do not have cumulative voting rights, the

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holders of a majority of the shares of common stock can elect all of the members of the board of directors standing for election, subject to the rights, powers and preferences of any outstanding series of preferred stock.

No share of common stock affords any preemptive rights or is convertible, redeemable, assessable or entitled to the benefits of any sinking or repurchase fund. Holders of common stock will be entitled to dividends in the amounts and at the times declared by our board of directors in its discretion out of funds legally available for the payment of dividends.

Holders of common stock will share equally in our assets on liquidation after payment or provision for all liabilities and any preferential liquidation rights of any preferred stock then outstanding. All outstanding shares of common stock are fully paid and non-assessable.

Preferred Stock

Our certificate of incorporation provides that shares of preferred stock may be issued from time to time in one or more series. Our board of directors has authority to issue up to 5,000,000 shares of preferred stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by our stockholders. The rights of holders of our common stock may be subject to, and adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control and may adversely affect the voting and other rights of holders of our common stock. We have no present plans to issue any shares of preferred stock after this offering.

Warrants

We may issue warrants to purchase shares of common stock or preferred stock. Warrants may be issued independently or together with any shares of common stock or preferred stock and may be attached to or separate from such shares of common stock or preferred stock. Each series of warrants may be issued under a separate warrant agreement to be entered into between us and a warrant agent. The applicable prospectus supplement will describe the following terms of any warrants in respect of which this prospectus is being delivered:

the title of the warrants;

the price or prices at which the warrants will be issued;

the periods during which the warrants are exercisable;

the number of shares of common stock or preferred stock for which each warrant is exercisable;

the exercise price for the warrants, including any changes to or adjustments in the exercise price;

if applicable, the date on and after which the warrants and the related common stock or preferred stock will be separately transferable;

any listing of the warrants on a securities exchange or automated quotation system;

if applicable, a discussion of material United States federal income tax consequences and other special considerations with respect to any warrants; and

any other terms of the warrants, including terms, procedures and limitations relating to the transferability, exchange and exercise of such warrants.

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Series A Warrants

Each Series A Warrant is exercisable for one share of our common stock at an exercise price of \$0.01 per share. The exercise price and number of shares issuable upon exercise of the Series A Warrants are subject to appropriate adjustment in the event of stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock.

The Series A Warrants expire February 8, 2016. Except as indicated below, the Series A Warrants are exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise. If such shares of common stock are not delivered to such holder within three trading days following such exercise, we have agreed to pay to such holder, in cash, as liquidated damages, an amount equal to (A) the difference between (i) the closing price of our common stock on such third trading day and (ii) the closing price of our common stock on the date such shares of common stock are actually delivered multiplied by (B) the number of shares of common stock purchased upon such exercise.

If, at any time during the Series A Warrant exercisability period, the fair market value of our common stock exceeds the exercise price of the Series A Warrants, the holder may elect to effect a cashless exercise of the Series A Warrants, in whole or in part, by surrendering the Series A Warrants to us, together with delivery to us of a duly executed exercise notice, and canceling a portion of the relevant Series A Warrant in payment of the purchase price payable in respect of the number of shares of our common stock purchased upon such exercise.

The number of shares of common stock that may be acquired by the registered holder upon any exercise of Series A Warrants shall be limited to the extent necessary to ensure that, following such exercise, the total number of shares of common stock then beneficially owned by such holder and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act does not exceed 9.999% of the total number of issued and outstanding shares of our common stock (including for such purpose the shares of common stock issuable upon such exercise). This limitation may be waived by such holder upon not less than 61 days' prior notice to us. In no event, however, may a holder exercise warrants if, following such exercise, such holder would beneficially own 20% or more of our outstanding common stock.

If, at any time while the Series A Warrants are outstanding, we effect (i) any reclassification of our common stock or any compulsory share exchange pursuant to which our common stock is effectively converted into or exchanged for other securities, cash or property, (ii) any consolidation, merger or combination with or into another corporation as a result of which holders of our common stock shall be entitled to receive stock, securities or other property or assets (including cash) with respect to or in exchange for such common stock, or (iii) any sale or conveyance of our property or assets as, or substantially as, an entirety to any other entity as a result of which holders of our common stock shall be entitled to receive stock, securities or other property or assets (including cash) with respect to or in exchange for such common stock (in any such case, a "Fundamental Transaction"), then we, or such successor corporation or transferee, as the case may be, will make appropriate provision by amendment of the warrant agreement or by the successor corporation or transferee executing with the warrant agent an agreement so that the holders of the Series A Warrants then outstanding shall have the right at any time thereafter, upon exercise of such warrants to receive the kind and amount of securities, cash and other property receivable upon such Fundamental Transaction as would be received by a holder of the number of shares of our common stock issuable upon exercise of such holder's Series A Warrants immediately prior to such Fundamental Transaction.

The Series A Warrants are traded on The Nasdaq Capital Market under the symbol "RPRXW."

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Except by virtue of such holder's ownership of shares of our common stock, the holders of the Series A Warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their Series A Warrants.

No fractional warrants will be issued and no fractional shares will be issued upon exercise of the Series A Warrants, but rather we will round such fraction down to the nearest whole warrant or share, as the case may be.

The terms of the Series A Warrants may not be amended without consent of holders of Series A Warrants entitled, upon exercise thereof, to receive not less than 66²/₃% of shares of our common stock issuable thereunder.

Series B Warrants

Each Series B Warrant is exercisable for one share of our common stock at an exercise price of \$2.49 per share. The exercise price and number of shares issuable upon exercise of the Series B Warrants are subject to appropriate adjustment in the event of stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock.

The Series B Warrants expire on February 8, 2016. Except as indicated below, the Series B Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise. If such shares of common stock are not delivered to such holder within three trading days following such exercise, we have agreed to pay to such holder, in cash, as liquidated damages, an amount equal to (A) the difference between (i) the closing price of our common stock on such third trading day and (ii) the closing price of our common stock on the date such shares of common stock are actually delivered multiplied by (B) the number of shares of common stock purchased upon such exercise.

If, at any time during the Series B Warrant exercisability period, the fair market value of our common stock exceeds the exercise price of the Series B Warrants, the holder may elect to effect a cashless exercise of the Series B Warrants, in whole or in part, by surrendering the Series B Warrants to us, together with delivery to us of a duly executed exercise notice, and canceling a portion of the relevant Series B Warrant in payment of the purchase price payable in respect of the number of shares of our common stock purchased upon such exercise.

The number of shares of common stock that may be acquired by the registered holder upon any exercise of Series B Warrants shall be limited to the extent necessary to ensure that, following such exercise, the total number of shares of common stock then beneficially owned by such holder and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act does not exceed 9.999% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise) of the Company. This limitation may be waived by such holder upon not less than 61 days' prior notice to us. In no event, however, may a holder exercise warrants if, following such exercise, such holder would beneficially own 20% or more of our outstanding common stock.

Under the terms of the Series B Warrants, we may require the exercise of all of the Series B Warrants if our common stock trades at or above \$8.00 per share for a period of at least 20 trading days of 30 consecutive trading days. In the event that a Holder of Series B Warrants is restricted from exercising the Warrants pursuant to the terms of Section 6(e) of the Warrant Agreement (which provides for certain beneficial ownership limitations), the Holder is required to use commercially reasonable efforts to sell shares of Common Stock of the Company held by such Holder to the extent necessary to allow such Holder to exercise the Series B Warrants without the restrictions of such

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Section 6(e). On July 3, 2012, our common stock reached this price threshold, however, we have not yet required the exercise of the Series B Warrants pursuant to this provision.

If, at any time while the Series B Warrants are outstanding, we effect a Fundamental Transaction, then we, or such successor corporation or transferee, as the case may be, will make appropriate provision by amendment of the warrant agreement or by the successor corporation or transferee executing with the warrant agent an agreement so that the holders of the Series B Warrants then outstanding shall have the right at any time thereafter, upon exercise of such warrants to receive the kind and amount of securities, cash and other property receivable upon such Fundamental Transaction as would be received by a holder of the number of shares of our common stock issuable upon exercise of such holder's Series B Warrants immediately prior to such Fundamental Transaction.

The Series B Warrants are traded on The Nasdaq Capital Market under the symbol "RPRXZ."

Except by virtue of such holder's ownership of shares of our common stock, the holders of the Series B Warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their Series B Warrants.

No fractional warrants will be issued and no fractional shares will be issued upon exercise of the Series B Warrants, but rather we will round such fraction down to the nearest whole warrant or share, as the case may be.

The terms of the Series B Warrants may not be amended without consent of holders of Series B Warrants entitled, upon exercise thereof, to receive not less than $66\frac{2}{3}\%$ of shares of our common stock issuable thereunder.

Rights Agreement

Pursuant to our rights agreement we entered into in September 1999, as amended, each share of our common stock, including those being issued in this offering, has four preferred stock purchase rights attached to it. Each right entitles the holder to purchase from us one one-hundredth of a share of Series One Junior Participating Preferred Stock at a price of \$20.00, subject to adjustment.

The rights will separate from our common stock and a distribution date will occur upon the earlier of (i) 10 days following the date of public announcement that a person or group of persons has become an acquiring person (defined below) or (ii) 10 business days (or such later date as may be determined by action of the board of directors prior to the time a person becomes an acquiring person) following the commencement of, or the announcement of an intention to make, a tender offer or exchange offer upon consummation of which the offeror would, if successful, become an acquiring person (the earlier of such dates being called the distribution date). The term "acquiring person" means any person who or which, together with all of its affiliates and associates, shall be the beneficial owner of 20% or more of our outstanding common stock.

The rights are not exercisable until the distribution date. The rights will expire on September 13, 2015.

In the event that following the date of public announcement that an acquiring person has become such, we are acquired in a merger or other business combination transaction or more than 50% of our consolidated assets or earning power are sold, proper provision will be made so that each holder of a right will thereafter have the right to receive, upon the exercise thereof at the then current exercise price of the right, that number of shares of common stock of the acquiring company which at the time of such transaction will have a market value of two times the exercise price of the right. This is known as a flip-over right.

In the event that a person who is not exempt becomes an acquiring person, proper provision shall be made so that each holder of a right (other than the acquiring person and its affiliates and

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associates) will thereafter have the right to receive upon exercise that number of shares of our common stock (or, under certain circumstances, cash, other equity securities or property) having a market value equal to two times the purchase price of the rights. This is known as a flip-in right. Upon the occurrence of the foregoing event giving rise to the exercisability of the rights, any rights that are or were at any time owned by an acquiring person shall become void.

We may redeem the rights in whole, but not in part, at a price of \$0.01 per right prior to the earlier of the expiration of the rights or their triggering; provided, that (i) if the board authorizes redemption on or after the time a person becomes an acquiring person, then such authorization must be with the approval of a majority of our directors and (ii) the period for redemption may, upon approval of a majority of our directors, be extended by amending the rights agreement.

The terms of the rights may be amended by the board without the consent of the holders of the rights at any time and from time to time provided that such amendment does not adversely affect the interests of the holders of the rights. In addition, during any time that the rights are subject to redemption, the terms of the rights may be amended by approval of a majority of our directors, including an amendment that adversely affects the interests of the holders of the rights, without the consent of the holders of rights.

A complete description of the rights, the rights agreement with Computershare Trust Company, N.A., as rights agent, and the Series One Junior Participating Preferred Stock is hereby incorporated by reference from the information appearing under the caption "Item 1. Description of the Registrant's Securities to be Registered" contained in the Registration Statement on Form 8-A filed on September 3, 1999, and as amended by amendments to such Registration Statement on Form 8-A/A filed on September 11, 2002, October 31, 2002, June 30, 2005, January 10, 2008, October 10, 2008 and September 9, 2010.

Transfer Agent and Warrant Agent

The transfer agent for our common stock and warrant agent for our warrants is Computershare Trust Company, N.A.

Anti-Takeover Effects of Certificate, Bylaws, Stockholder Rights Plan and Delaware Law

General

Our certificate of incorporation, bylaws and stockholder rights plan contain provisions that are designed in part to make it more difficult and time-consuming for a person to obtain control of our company. The provisions of our certificate of incorporation, bylaws and stockholder rights plan reduce the vulnerability of our company to an unsolicited takeover proposal. These provisions may also have an adverse effect on the ability of stockholders to influence the governance of our company and may result in entrenchment of management. This may adversely affect the liquidity and price of our common stock in certain situations. We have summarized the material terms of our certificate of incorporation and bylaws below and the terms of our stockholder rights plan above. You may read our certificate of incorporation, bylaws and stockholder rights plan in their entirety for the full terms of the rights of holders of our common stock.

Delaware Business Combination Statute

Section 203 of the Delaware General Corporation Law provides that, subject to specified exceptions, an "interested stockholder" of a Delaware corporation may not engage in any "business combination," including general mergers or consolidations or acquisitions of additional shares of the

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corporation, with the corporation for a three-year period following the time that such stockholder becomes an interested stockholder unless:

before such time, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

upon consummation of the transaction which resulted in the stockholder becoming an "interested stockholder," the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding specified shares; or

on or after such time, the business combination is approved by the board of directors of the corporation and authorized not by written consent, but at an annual or special meeting of stockholders, by the affirmative vote of at least 66²/₃% of the outstanding voting stock not owned by the interested stockholder.

Under Section 203, the restrictions described above also do not apply to specified business combinations proposed by an interested stockholder following the announcement or notification of a transaction specified in Section 203 and involving the corporation and a person who:

had not been an interested stockholder during the previous three years; or

became an interested stockholder with the approval of a majority of the corporation's directors;

if such transaction is approved or not opposed by a majority of the directors who were directors prior to any person becoming an interested stockholder during the previous three years or were recommended for election or elected to succeed such directors by a majority of such directors.

Except as otherwise specified in Section 203, an "interested stockholder" is defined to include:

any person that is the owner of 15% or more of the outstanding voting stock of the corporation, or is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation at any time within three years immediately before the date of determination; and

the affiliates and associates of any such person.

Under some circumstances, Section 203 makes it more difficult for an interested stockholder to effect various business combinations with a corporation for a three-year period.

Advance Notice Requirements for Director Nominations and Other Stockholder Proposals

In order to nominate a director at an annual meeting, our bylaws require that a stockholder follow certain procedures. In order to recommend a nominee for director, a stockholder must be a stockholder of record at the time the stockholder gives notice of its recommendation and the stockholder must be entitled to vote for the election of directors at the meeting at which such nominee will be considered. Stockholder recommendations must be made pursuant to written notice delivered to our principal executive offices no less than 50 days nor more than 75 days prior to the date of the annual or special meeting at which directors are to be elected; provided, that if less than 65 days' notice or prior public disclosure of the date of the meeting is given or made to the stockholders, notice by the stockholder must be received at our principal executive offices not later than the close of business on the 15th day following the day on which such notice of the date of the meeting was mailed or such public disclosure was made.

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The stockholder notice must set forth the following:

1. As to each person the stockholder proposes to nominate for election as a director, all information relating to such person that would be required to be disclosed in solicitations of proxies for the election of such nominees as directors pursuant to rules promulgated under the Exchange Act;
2. The written consent to serve as a director if elected by each person nominated;
3. Name and address of the stockholder as they appear on our books; and
4. The class and number of shares of our common stock beneficially owned by such stockholder.

In addition to complying with the foregoing procedures, any stockholder nominating a director must also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder.

Additionally, with respect to other stockholder proposals, notice of the proposal must be received no less than 50 nor more than 75 days prior to the annual meeting at which such proposal is to be considered; provided, that if less than 65 days' notice or prior public disclosure of the date of the meeting is given or made to the stockholders, notice by the stockholder must be received at our principal executive offices not later than the close of business on the 15th day following the day on which such notice of the date of the annual meeting was mailed or such public disclosure was made.

Authorized But Unissued Shares

Our authorized but unissued shares of common stock and preferred stock are available for future issuances without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

DESCRIPTION OF RIGHTS

We may issue rights to purchase shares of preferred stock or common stock that are being registered hereunder. These rights may be issued independently or together with any other security offered hereby and may or may not be transferable by the stockholder receiving the rights in such offering. In connection with any offering of such rights, we may enter into a standby arrangement with one or more underwriters or other purchasers pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering.

Each series of rights will be issued under a separate rights agreement which we will enter into with a bank or trust company, as rights agent, all as set forth in the applicable prospectus supplement. The rights agent will act solely as our agent in connection with the certificates relating to the rights and will not assume any obligation or relationship of agency or trust with any holders of rights certificates or beneficial owners of rights. We will file the rights agreement and the rights certificates relating to each series of rights with the Securities and Exchange Commission, and incorporate them by reference as an exhibit to the registration statement of which this prospectus is a part on or before the time we issue a series of rights.

The applicable prospectus supplement will describe the specific terms of any offering of rights for which this prospectus is being delivered, including the following:

the date of determining the stockholders entitled to the rights distribution;

the number of rights issued or to be issued to each stockholder;

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the exercise price payable for each share of preferred stock, common stock or other securities upon the exercise of the rights;

the number and terms of the shares of preferred stock, common stock or other securities which may be purchased per each right;

the extent to which the rights are transferable;

the date on which the holder's ability to exercise the rights shall commence, and the date on which the rights shall expire;

the extent to which the rights may include an over-subscription privilege with respect to unsubscribed securities;

if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of such rights; and

any other terms of the rights, including the terms, procedures, conditions and limitations relating to the exchange and exercise of the rights.

The description in the applicable prospectus supplement of any rights that we may offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable rights certificate, which will be filed with the Securities and Exchange Commission.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of one or more shares of common stock, shares of preferred stock, or warrants or any combination of such securities.

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

the terms of the units and of the common stock, preferred stock, and warrants comprising the units, including whether and under what circumstances the securities comprising the units may be traded separately;

a description of the terms of any unit agreement governing the units;

a description of the provisions for the payment, settlement, transfer or exchange of the units;

any material United States federal income tax consequences; and

how, for United States federal income tax purposes, the purchase price paid for the units is to be allocated among the component securities.

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PLAN OF DISTRIBUTION

We are registering securities which may be sold from time to time after the date of this prospectus. We may sell the securities through underwriters or dealers, through agents, or directly to one or more purchasers. The securities may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. One or more prospectus supplements will describe the terms of the offering of the securities, including:

the name or names of any agents or underwriters;

the purchase price of the securities and the proceeds we will receive from the sale;

any over-allotment options under which underwriters may purchase additional securities from us;

any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;

any discounts or concessions allowed or reallocated or paid to dealers; and

any securities exchange or market on which the common stock or other securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all the securities offered by the prospectus supplement if they are to purchase any of such offered shares. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement naming the underwriter, the nature of any such relationship.

We may sell the securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of the securities and we will describe any commissions we will pay the agent in the prospectus supplement.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase the securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against certain civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to such liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

Any underwriter may engage in over-allotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying securities so long as the stabilizing bids do not exceed a specified maximum price. Short covering transactions involve exercise by underwriters of an over-allotment option or purchases of the securities in the open market after the distribution is

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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 short covering transaction. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Our common stock is quoted on the Nasdaq Capital Market. One or more underwriters may make a market in our common stock or other securities, but the underwriters will not be obligated to do so and may discontinue market making at any time without notice. We cannot give any assurance as to liquidity of the trading market for our common stock or other securities.

Any underwriters who are qualified market makers on the Nasdaq Capital Market may engage in passive market making transactions in the securities on the Nasdaq Capital Market in accordance with Rule 103 of Regulation M under the Securities Exchange Act of 1934, during the business day prior to the pricing of the 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.

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LEGAL MATTERS

The validity of the securities being offered by this prospectus will be passed upon for us by Jackson Walker L.L.P., Houston, Texas.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2011 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated statements of stockholders' equity for each of the eight years in the period ended December 31, 2001 were audited by Arthur Andersen LLP. Arthur Andersen LLP has not consented to the incorporation of their reports on the consolidated statements of stockholders' equity for each of the eight years in the period ended December 31, 2001 incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2011, and we have dispensed with the requirement to file their consent in reliance upon Rule 437a of the Securities Act of 1933. Because Arthur Andersen LLP has not consented to the incorporation of their reports in this prospectus, you will not be able to recover against Arthur Andersen LLP under Section 11 of the Securities Act of 1933 for any untrue statements of a material fact contained in the financial statements audited by Arthur Andersen LLP or any omissions to state a material fact required to be stated therein.

WHERE YOU CAN FIND MORE INFORMATION

We are required to file annual, quarterly and current reports, and other information with the SEC. You may read and copy any document which we have filed at the SEC's public reference room at:

Securities and Exchange Commission
100 F. Street, N.E.
Washington, D.C. 20549

Please call the SEC at 1-800-SEC-0330 for more information on the operation of the public reference room. Copies of our SEC filings are also available to the public from the SEC's web site at www.sec.gov.

Documents filed by us pursuant to the Securities Exchange Act may be reviewed and/or obtained through the SEC's Electronic Data Gathering Analysis and Retrieval System, which is publicly available through the SEC's web site (www.sec.gov).

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the reports or documents that have been incorporated by reference in the prospectus contained in the registration statement of which this prospectus is a part but not delivered with this prospectus. We will provide those reports and documents upon written or oral request and at no cost to the requester. Requests for reports or documents should be submitted to the company at the following address or telephone number:

Repros Therapeutics Inc.
2408 Timberloch Place, Suite B-7
The Woodlands, Texas 77380
(281) 719-3400

Each of the reports and documents may also be accessed through our website which is located at www.reprosrx.com.

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This prospectus is part of a registration statement that we have filed with the SEC relating to the securities offered hereby. As permitted by SEC rules, this prospectus does not contain all of the information we have included in the registration statement and the accompanying exhibits and schedules we file with the SEC. You may refer to the registration statement, exhibits and schedules for more information about us and such securities. The registration statement, exhibits and schedules are available at the SEC's public reference room or through its Internet website.

The SEC allows us to "incorporate by reference" information into this Prospectus, which means that we can disclose important information to you by referring you to another document or report filed separately with the SEC. The information incorporated by reference is deemed to be a part of this prospectus, except to the extent any information is superseded by this prospectus. The following documents which have been filed by us with the SEC and contain important information about us are incorporated into this prospectus:

Annual Report on Form 10-K for the year ended December 31, 2011 filed with the SEC on March 27, 2012;

Quarterly Reports on Form 10-Q for the quarters ended March 31, 2012 and June 30, 2012 filed with the SEC on May 15, 2012 and August 13, 2012, respectively;

Current Reports on Form 8-K filed with the SEC on January 3, 2012, January 4, 2012, January 5, 2012, January 13, 2012, January 27, 2012, February 27, 2012, April 30, 2012, May 9, 2012, May 16, 2012, May 22, 2012, May 29, 2012, June 4, 2012, June 14, 2012, June 18, 2012, July 9, 2012, July 16, 2012, July 23, 2012, July 30, 2012, August 27, 2012, September 5, 2012, September 12, 2012 and October 9, 2012; and

The description of Repros' common stock contained in Repros' Registration Statement on Form 8-A filed on September 3, 1999, as amended by amendments to such registration statement on Form 8-A/A filed on September 11, 2002, October 31, 2002, June 30, 2005, January 10, 2008, October 10, 2008 and September 9, 2010.

Notwithstanding the foregoing, information that we elect to furnish, but not file, or have furnished, but not filed, with the SEC in accordance with SEC rules and regulations is not incorporated into the registration statement or this prospectus and does not constitute a part hereof.

All documents filed by Repros pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (excluding any information furnished to the SEC) subsequent to the date of this filing and prior to the termination of this offering shall be deemed to be incorporated in this Prospectus and to be a part hereof from the date of the filing of such document. Any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

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3,000,000 Shares

Common Stock

PROSPECTUS SUPPLEMENT

BofA Merrill Lynch

Lazard Capital Markets

Ladenburg Thalmann & Co. Inc.

Ascendant Capital Markets, LLC

June , 2013