REPROS THERAPEUTICS INC.
Form 424B5
March 02, 2010

This filing is made pursuant to Rule 424(b)(5)
under the Securities Act of 1933, as amended, in connection
with Registration No. 333-163648

Prospectus Supplement
(To Prospectus Dated January 5, 2010)

Up to $10,000,000

Common Stock

We have entered into an equity distribution agreement with Ladenburg Thalmann & Co., Inc. ("Ladenburg") relating to shares of common stock offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the equity distribution agreement, we may offer and sell up to $10,000,000 of our common stock from time to time through Ladenburg, subject to applicable regulatory requirements which currently would allow us to offer and sell up to approximately $7.8 million.

Our common stock is traded on the Nasdaq Capital Market under the symbol "RPRX". The last reported sale price of our common stock on the Nasdaq Capital Market on March 1, 2010 was $0.78 per share.

The aggregate market value of our outstanding common stock held by non-affiliates is $23,616,424 based on 25,820,005 shares of outstanding common stock, of which 25,675,608 shares are held by non-affiliates, and a per share price of $0.9198 based on the closing sale price of our common stock on January 27, 2010. We have not offered any securities pursuant to General Instruction I.B.6. of Form S-3 during the prior 12 calendar month period that ends on, and includes, the date of this prospectus.

Sales of shares of common stock, if any, under this prospectus supplement and the accompanying prospectus may be made in negotiated transactions or transactions that are deemed to be "at the market" offerings as defined in Rule 415 under the Securities Act of 1933, as amended, including sales made directly on the Nasdaq Capital Market or sales made to or through a market maker other than on an exchange. The sales agent will make all sales using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between the sales agent and us.

Ladenburg will receive from us a commission equal to 4% of the gross sales price of all shares sold through it under the equity distribution agreement. In connection with the sale of the shares of common stock on our behalf, Ladenburg may be deemed to be an "underwriter" within the meaning of the Securities Act of 1933, as amended, and the compensation of Ladenburg may be deemed to be underwriting commissions or discounts.

Investing in our common stock involves risks. See "Risk Factors" on page 5 of the accompanying prospectus and beginning on page 2 of our Annual Report on Form 10-K for the year ended December 31, 2008, which is incorporated by reference into the accompanying prospectus, and in our periodic reports and other information that we file from time to time with the Securities and Exchange Commission.

Neither the Securities and Exchange Commission, any state securities commission, nor any other regulatory body has approved or disapproved of these securities or determined if this prospectus supplement and the prospectus to which it relates are truthful and complete. Any representation to the contrary is a criminal offense.

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Ladenburg Thalmann & Co., Inc.

The date of this prospectus supplement is March 2, 2010.

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Prospectus Supplement



Prospectus

## About this Prospectus Supplement

We provide information to you about this offering of shares of our common stock in two separate documents that are bound together: (1) this prospectus supplement, which describes the specific details regarding this offering; and (2) the accompanying prospectus, which provides general information, some of which may not apply to this offering. Generally, when we refer to this "prospectus," we are referring to both documents combined. If information in this prospectus supplement is inconsistent with the accompanying prospectus, you should rely on this prospectus supplement.

You should rely only on information contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus. We have not, and Ladenburg has not, authorized anyone to provide you with information that is different. 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, the accompanying prospectus and the documents incorporated by reference herein and therein are accurate only as of their respective dates, regardless of the time of delivery of this prospectus supplement or of any sale of our common stock.

Proellex® and Androxal® are our trademarks. This prospectus supplement and the accompanying prospectus also contain trademarks, trade names and service marks of other companies, which are the property of their respective owners.

Prospectus Supplement Summary

This summary highlights selected information contained elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary may not contain all the information that you should consider before investing in our common stock. You should read the entire prospectus supplement and the accompanying prospectus carefully, including "Risk Factors" contained in this prospectus supplement and the financial statements incorporated by reference in the accompanying prospectus, before making an investment decision. This prospectus supplement may add to, update or change information in the accompanying prospectus.

ABOUT REPROS THERAPEUTICS INC.

Overview

The Company was organized as a Delaware corporation on August 20, 1987. We are a development stage biopharmaceutical company focused on the development of oral small molecule drugs for major unmet medical needs associated with male and female reproductive disorders. The clinical trials relating to Proellex® have been placed on clinical hold by the FDA due to safety-related concerns resulting from elevated liver enzymes in a number of patients enrolled in the clinical trials. Completion of our ongoing clinical trial activities relating to our other product candidate, Androxal®, is subject to, among other things, adequate cash being available.

As of September 30, 2009, we had accumulated losses of $173.1 million, approximately $2.5 million in cash and cash equivalents, and our accounts payable and accrued expenses were approximately $12.2 million. As a result of the October Settlement Agreement and the Subsequent Settlement Agreements (each as defined in "Recent Developments" below) with certain of our creditors to issue them shares of our common stock and cash as payment in full for our then-outstanding liabilities with such creditors, subsequent to September 30, 2009, we have reduced the amount of our accounts payable and accrued expenses by approximately $9.2 million. Notwithstanding, the amount of cash on hand is not sufficient to continue to fund our ongoing clinical trials of Androxal®, complete all necessary activities relating to the suspension of our clinical trial program for Proellex®, and pay our accounts payable and accrued expenses as well as our normal corporate overhead and expenses. The foregoing and other matters raise substantial doubt about our ability to continue as a going concern.

We continue to explore potential additional financing alternatives that may allow us to maintain our current reduced level of operations; however, there can be no assurance that we will be successful in raising any such additional funds on a timely basis or at all. Significant additional capital will be required for us to continue development of either of our product candidates. Failure to raise sufficient funds during the first half of 2010 will likely result in the dissolution of the Company.

Our current product candidates consist of the following:

Androxal® (male reproductive health)

We believe our product candidate for male reproductive health, Androxal®, is a new chemical entity. Androxal® is a single isomer of clomiphene citrate and is an orally active proprietary small molecule compound. Androxal® is currently being developed, subject to adequate funds being available and appropriate regulatory approvals, for two product indications-fertility and type 2 diabetes.

Fertility

We are developing Androxal® for men of reproductive age with low testosterone levels who want to maintain their fertility while being treated for their low testosterone condition. During the second quarter of 2008, we initiated a Phase 2b proof-of-concept clinical trial in which we monitored the effects of Androxal® on male fertility and testicular function in patients being treated for low testosterone as compared to Testim®, a popular marketed topical testosterone medication. On October 6, 2009 we announced that Androxal® was able to maintain sperm counts in men being treated for their low testosterone levels. Testim® resulted in suppressed sperm levels while men were being treated with that topical gel. We requested a meeting with the FDA to discuss such results. In correspondence leading up to such meeting, the FDA stated that it could not agree with such proposed indication for Androxal® at that time because the patient population had not been adequately defined and that it was not aware of certain data to support our position.

On January 25, 2010, we participated in a teleconference with the FDA relating to the future clinical path for Androxal®. During such teleconference, the FDA requested that we (i) propose a label that better defines the population of individuals for whom we believe will benefit from the use of Androxal® and (ii) conduct a literature review of the incidence of infertility associated with the use of exogenous testosterone as supportive of our data. The FDA suggested that if it finds the submission appropriate, no additional

clarifying meeting regarding this indication for Androxal® may be required. On February 8, 2010, we announced that we submitted the requested information to the FDA and we are currently awaiting the FDA's response to such submissions. Given that there is currently an acceptable treatment regimen for men with low testosterone, there is significant uncertainty as to whether or not an additional approach such as Androxal® would be approved by the FDA or accepted in the market. At this time there can be no assurances that the Company and the FDA will agree on a mutually acceptable clinical path for Androxal®.

Type 2 Diabetes

On February 1, 2010, the Company received confirmation from the Division of Metabolic and Endocrine Products that our Investigational New Drug Application for the study of oral Androxal® in the treatment of hypogonadal men with type 2 diabetes was accepted, and that we may initiate a Phase 2a trial. This clinical trial is dependent on additional funds being raised. At this time it is too early in the clinical development process to estimate when or even if a NDA for Androxal® will be submitted for this indication. The plan to develop Androxal® in this new indication replaces our previously announced plan to develop Androxal® in men with adult-onset idiopathic hypogonadotrophic hypogonadism, or AIHH, with concomitant plasma glucose and lipid elevations, all of which are components of Metabolic Syndrome.

Proellex® (female reproductive health)

Proellex®, our product candidate for female reproductive health, is a new chemical entity that acts as a selective blocker of the progesterone receptor and is being developed for the treatment of symptoms associated with uterine fibroids and endometriosis. However, as a result of the recent liver toxicity exhibited by Proellex®, all ongoing clinical trial activities have been put on hold by the FDA. There is currently no FDA-approved orally administered drug treatment for the long-term treatment of uterine fibroids or endometriosis.

Our estimates regarding the timing of our Proellex® clinical development program are completely on hold at this time in light of the FDA clinical hold and our recent discontinuation of ongoing clinical trials. In addition, any future development efforts are totally dependent on our ability to raise sufficient capital or find an appropriate partner to proceed and on decisions by the FDA regarding the current clinical hold on Proellex® clinical trials. If the FDA were to lift the clinical hold on Proellex®, and if the FDA requires a lower dosage of Proellex® to be used for future clinical trials, the Company would be required to commence Phase 2 studies again with the required lower dosage, thereby resulting in extensive additional costs and delays. The length of time required to complete Phase 1, Phase 2 and Phase 3 clinical trials and long-term Open Label Safety Trials may vary substantially according to factors relating to the particular trial, such as the type and intended use of the drug candidate, the clinical trial design and the ability to enroll suitable patients. We have also, in the past, had difficulty recruiting patients into our Proellex® clinical trials primarily due to the various test procedures that are required, including multiple endometrial biopsies. Recruiting patients would likely be even more difficult due to the recent liver toxicity exhibited by Proellex®.

Business Strategy

Provided we are able to obtain sufficient funds to continue our business, we plan to focus our clinical program on Androxal®. Should the FDA permit the resumption of the Proellex® clinical trials, we will assess whether there are sufficient funds available to continue development ourselves of such product candidate or whether such program would be more appropriately funded by a corporate partner. Therefore, 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 a corporate partnering opportunity will be found.

Risks Affecting Us

Our business is subject to numerous risks as discussed more fully in "Risk Factors" below. We are exploring various financing alternatives to address our short term liquidity needs. No assurance can be given that we will be successful in obtaining financing on acceptable terms or at all. We anticipate that if we are able to secure financing, that such financing will result in significant dilution of the ownership interests of our current 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. In the event that we are unable to obtain adequate financing to meet our short term liquidity needs, we will pursue other options, including but not limited to, reductions of expenses, sale of the Company, sale or license of a portion or all of our assets or the liquidation of the Company.

In addition, we have suspended dosing in the clinical trials of Proellex®, have not received regulatory approval for any of our product candidates, have not successfully earned any significant commercial revenues from any of our product candidates and may never launch either of our product candidates. If we cannot resume dosing in the clinical trials of Proellex® or do not successfully commercialize any of our product candidates, we will be unable to achieve our business objectives. In addition, the

reported results of our clinical trials completed to date may not be indicative of results that will be achieved in later-stage clinical trials involving larger and more diverse patient populations. As of September 30, 2009, we had an accumulated deficit of approximately $173.1 million, accounts payable and accrued expenses of approximately $12.2 million and cash and cash equivalents of approximately $2.5 million. As a result of the October Settlement Agreement and the Subsequent Settlement Agreements (each as defined in "Recent Developments" below) with certain of our creditors to issue them shares of our common stock and cash as payment in full for our then-outstanding liabilities with such creditors, subsequent to September 30, 2009, we have reduced the amount of our accounts payable and accrued expenses by approximately $9.2 million. Notwithstanding, there is a substantial doubt about our ability to continue as a going concern and we expect to continue to incur significant losses over the next several years, and we may never become profitable. Our financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Corporate Information

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.reprosrx.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. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and all amendments to such reports are made available free of charge through the Investor Relations section of our website as soon as reasonably practicable after they have been filed or furnished with the Securities and Exchange Commission.

Recent Developments

On September 11, 2009, we completed a direct registered offering of 1.5 million shares of our common stock at a purchase price of $0.65 per share for aggregate proceeds after expenses of approximately $869,000. On October 13, 2009, we completed a direct registered offering of 3.5 million shares of our common stock at a purchase price of $1.27 per share for aggregate proceeds after expenses of approximately $4.1 million. Such registered direct offerings resulted in an aggregate of approximately $5.0 million net proceeds to us. The shares of common stock offered by us in such offerings were registered under our prior shelf registration statement on Form S-3 (File No. 333-155265), which was filed with the Securities and Exchange Commission on November 10, 2008 and declared effective by the Securities and Exchange Commission on November 26, 2008.

On October 29, 2009, we entered into a Master Settlement Agreement and Releases (the "October Settlement Agreement") with certain trade creditors, pursuant to which we issued 5,361,194 shares of our common stock, at $1.10 per share, and paid approximately $2.77 million in cash to such creditors as payment in full for our then-outstanding liabilities of approximately $8.7 million and for the release of the claims held by and the dismissal of the litigation commenced by such creditors against the Company. Pursuant to the terms of the October Settlement Agreement, we filed a registration statement on Form S-3 (File No. 333-163510), which was filed with the Securities and Exchange Commission on December 4, 2009, to register the resale of such shares by such creditors. Such registration statement was declared effective by the Securities and Exchange Commission on January 7, 2010.

On October 29, 2009, Katherine A. Anderson was engaged as the Chief Accounting Officer of the Company.

Effective October 29, 2009, Dr. Paul Lammers, resigned his position of President.

Effective October 30, 2009, the Company eliminated the position of Senior Vice President of Regulatory and Clinical Affairs held by Dr. Andre van As. The Company is obligated to pay Dr. van As, under his employment contract, salary and benefits for six months. Dr. Jean Fourcroy, member of the Company's Board of Directors and former

Medical Officer at the FDA's Division of Reproductive and Urological Products, has agreed to serve as Company's Chief Medical Officer on an as needed basis.

On November 12, 2009, Mark Lappe resigned his position as a member of the Company's board of directors and chairperson of the board of directors. Since such date, Nola E. Masterson, a member of the Company's board of directors since 2004, has been acting as chairperson of the Company's board of directors.

On November 12, 2009, Dr. Jaye Thompson was appointed to our board of directors and to serve as a member of the audit committee of our board of directors.

On November 16, 2009, our board of directors elected Joseph S. Podolski as President of the Company.

On November 17, 2009, our stockholders approved an amendment to our Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of our common stock from 30 million to 75 million.

On December 15, 2009, we received notice from Nasdaq advising that we have not maintained a minimum bid price of $1.00 per share as required for continued listing on the Nasdaq Stock Market. We have been provided until June 14, 2010 to regain compliance with such listing requirement. If we do not demonstrate compliance by such date, our securities will be subject to delisting from the Nasdaq Stock Market.

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On January 12, 2010, we received a letter from the Nasdaq Hearings Panel (the "Panel") stating that our shares would be transferred from the Nasdaq Global Market to the Nasdaq Capital Market, effective at the open of the trading session on Thursday, January 14, 2010. As previously announced, we have not been in compliance with Marketplace Rules 5450(b)(2)(A) and (C), requiring (i) a minimum $50 million market value of listed securities and (ii) a minimum market value of publicly held shares of $15 million, respectively, for continued inclusion on the Nasdaq Global Market. The Panel's determination to transfer our shares to the Nasdaq Capital Market follows our hearing before the Panel on December 3, 2009. If we cannot demonstrate compliance with certain requirements for continued listing on the Nasdaq Capital Market, including the requirement to maintain either stockholders' equity of at least $2.5 million or a market value of listed securities of $35 million, by May 5, 2010, our shares will be subject to immediate delisting. As described above, we continue to have until June 14, 2010 to regain compliance with the listing requirement to maintain a minimum bid price of $1.00 per share.

Between November 30, 2009 and January 21, 2010, the Company entered into settlement agreements and mutual releases (the "Subsequent Settlement Agreements") with certain of its creditors, pursuant to which the Company issued an aggregate of 281,407 shares (the "Additional Settlement Shares") of common stock and paid an aggregate of $87,672 in cash as payment in full for its then-outstanding liabilities to such creditors. Pursuant to the Subsequent Settlement Agreements, the Company agreed to use its best efforts to prepare and file a registration statement to register the Additional Settlement Shares as soon as possible following the date of each Subsequent Settlement Agreement, to use its best efforts to have such registration statement declared effective as soon as possible and to maintain such registration statement until all such Additional Settlement Shares registered thereunder to such creditors have been sold or for a period of one year, whichever comes first.

On March 1, 2010, we received notice that we were named as a co-defendant in a lawsuit brought against one of our clinical regulatory service providers ("CRO") relating to the Proellex® clinical trial study. The lawsuit was filed by an investigator and claims that the CRO did not pay it amounts owing to it relating to the Proellex® study. We did not engage the investigator and under our agreement with the CRO, we believe that we will be entitled to indemnification for any such costs or damages regarding such lawsuit. The amount claimed is approximately $175,000. An estimate of the possible costs or expenses to defend ourselves in this matter or risk of exposure under the litigation cannot be made at this time. Pursuant to the October Settlement Agreement, such CRO, on behalf of itself and its agents, released us from all claims which could be asserted by them against us. We believe such release covers the claims set forth in this lawsuit.

The Offering

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|---|---|
| Common stock offered by Repros | Shares of common stock having an aggregate offering price of up to $10 million, subject to applicable regulatory requirements which currently would allow us to offer and sell up to approximately $7.8 million. |
| Manner of offering | “At the market” offering that may be made from time to time through Ladenburg, as sales agents using commercially reasonable efforts. See “Plan of Distribution.” |
| Use of proceeds | We intend to use the net proceeds from this offering for general corporate purposes. |
| Nasdaq Capital Market symbol | RPRX |

## Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks 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 entitled "Risk Factors" contained in our most recent Annual Report on Form 10-K for the year ended December 31, 2008 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.

Forward-Looking Statements

Some of the statements contained (i) in this prospectus supplement and the accompanying prospectus or (ii) incorporated by reference into this prospectus supplement are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, 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 ability to continue as a going concern and to raise additional capital during the first half of 2010 on acceptable terms or at all;
- our ability to successfully defend the recently filed class action lawsuits;
- our ability to maintain the Company's listing on the Nasdaq Capital Market;
- whether a clear clinical path for Androxal® can be realized;
- the removal of the current clinical hold on further clinical trials for Proellex® by the Food and Drug Administration, or FDA, and the reestablishment of safe dosing in clinical trials for Proellex®;
- having available funding for the continued development of Proellex® and Androxal®;
- 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;
- 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 above carefully in addition to other information contained in this report before engaging in any transaction involving shares of our common stock. If any of these risks occur, they could harm our business, financial condition or results of operations. In such case, the trading price of our common stock could decline, and you may lose all or part of your investment.

The words “believe,” “should,” “predict,” “future,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “plan,” “e
“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 except as required by law 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.

## Use of Proceeds

We expect to receive approximately $7.4 million in net proceeds from this offering, assuming we sold the maximum amount currently allowed under General Instruction I.B.6. of Form S-3 which is approximately $7.8 million. “Net proceeds” is what we expect to receive after paying the expenses of this offering, including the sales agent fees, as described in “Plan of Distribution” below, 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.

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

## Price Range of Common Stock

Our common stock is quoted 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 Stock Market during the periods presented.

| | Price Range | |
|---|---|---|
| | High | Low |
| 2008 | | |
| First Quarter | $ 10.20 | $ 8.11 |
| Second Quarter | 11.09 | 8.21 |
| Third Quarter | 10.00 | 5.31 |
| Fourth Quarter | 11.25 | 5.68 |
| | | |
| 2009 | | |
| First Quarter | $ 13.94 | $ 5.84 |
| Second Quarter | 8.30 | 5.70 |
| Third Quarter | 6.01 | 0.65 |
| Fourth Quarter | 2.48 | 0.64 |
| | | |
| 2010 | | |
| First Quarter (January 2nd through March 1) | $ 1.22 | $ 0.68 |

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 March 1, 2010, the last sale price of our common stock, as reported by the Nasdaq Capital Market, was $0.78 per share. On March 1, 2010, there were approximately 177 holders of record and approximately 3,750 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. Payment of future dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs.

## Dilution

If you purchase shares of our common stock from us, your interest will be diluted to the extent of the difference between the public offering price per share you pay and the net tangible book value per share of our common stock immediately after this offering. Our net tangible book value as of September 30, 2009, was ($9.4) million, or approximately ($0.56) per share of common stock. After giving effect to the issuances under the October Settlement Agreement, the Subsequent Settlement Agreements and sale of 3,500,000 shares of common stock on October 13, 2009 (the "Prior Issuances") and after deduction of estimated expenses related thereto at such time, our pro forma net tangible book value as of September 30, 2009 would have been approximately $900,000, or $0.03 per share of common stock. 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. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of common stock in this offering and the net tangible book value per share of our common stock immediately after the offering.

Assuming we sold the entire aggregate amount of $10 million provided for in the equity distribution agreement at an assumed price to the public of $0.78 per share, the last reported sale price of our common stock on March 1, 2010, and after deducting the estimated commissions and offering expenses payable by us, our pro forma net tangible book value as of September 30, 2009, after giving effect to the Prior Issuances, would have been $10.4 million, or $0.27 per share of common stock. The adjustments made to determine pro forma net tangible book value per share are the following:

- An increase in total assets to reflect the net proceeds of the offering as described under “Use of Proceeds”; and
- The addition of the number of shares offered by this prospectus supplement to the number of shares outstanding.

The following table illustrates the pro forma increase in net tangible book value attributable to new investors in this offering of $0.24 per share and the dilution (the difference between the offering price per share and net tangible book value per share) to new investors:

| | | |
|---|---|---|
| Assumed offering price per share | | $ 0.78 |
| Net tangible book value per share as of September 30, 2009, after giving effect to the Prior Issuances | $ 0.03 | |
| Increase per share attributable to new investors of this offering | 0.24 | |
| Pro forma net tangible book value per share as of September 30, 2009, after giving effect to this offering and the Prior Issuances | | 0.27 |
| Dilution per share to investors participating in this offering | | $ 0.51 |

The information in the foregoing table does not take into account further dilution to new investors that could occur upon the exercise of outstanding options having a per share exercise price less than the price per share at which new investors purchase the shares offered hereby. The number of shares in the table above excludes as of September 30, 2009:

- 2,209,608 shares of common stock issuable upon the exercise of outstanding options at a weighted average exercise price of $5.76 per share; and
- 1,262,201 shares of common stock available for future issuance under our stock option plans.

The information in the foregoing table is provided for illustrative purposes and assumes that all of our common stock offered hereby in the aggregate amount of $10 million is sold at a price of $0.78 per share, the last reported sale price of our common stock on March 1, 2010. The shares, if any, sold pursuant to the equity distribution agreement will be sold from time to time at various prices that will depend largely on the market price of our common stock at the time

of sale. In addition, based on the closing price of our common stock on the Nasdaq Stock Market on January 27, 2010, we are currently limited to offer and sell no more than approximately $7.8 million in this offering.

## Plan of Distribution

Upon its acceptance of written instructions from us, Ladenburg will use its commercially reasonable efforts consistent with its sales and trading practices to solicit offers to purchase shares of our common stock, under the terms and subject to the conditions set forth in the equity distribution agreement. We will instruct Ladenburg as to the amount of common stock to be sold by Ladenburg. We may instruct Ladenburg not to sell common stock if the sales cannot be effected at or above the price designated by us in any instruction. We or Ladenburg may suspend the offering of common stock upon proper notice and subject to other conditions. Ladenburg may sell shares of our common stock by any method deemed to be an "at the market" offering, including without limitation sales made directly on the Nasdaq Capital Market or any other existing trading market for our common stock or to or through market makers. With our prior consent, Ladenburg may also sell shares of our common stock in privately negotiated transactions.

We will pay Ladenburg commissions for its services in acting as agent and/or principal in the sale of common stock. Ladenburg will be entitled to compensation of 4% of the gross sales price of all shares sold through it under the equity distribution agreement. We estimate that the total expenses for the offering, excluding compensation payable to Ladenburg under the terms of the equity distribution agreement, will be approximately $50,000.

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

We will report at least quarterly the number of shares of common stock sold through Ladenburg, as agent, under the equity distribution agreement, the net proceeds to us and the compensation paid by us to Ladenburg in connection with the sales of common stock.

Ladenburg has provided, and may in the future provide, various investment banking and advisory services for us from time to time for which they have received, and may in the future receive, customary fees and expenses. Ladenburg may, from time to time, engage in other transactions with and perform services for us in the ordinary course of their business.

In connection with the sale of the common stock on our behalf, Ladenburg may, and will with respect to sales effected in an "at the market" offering, be deemed to be an "underwriter" within the meaning of the Securities Act of 1933, and the compensation of Ladenburg may be deemed to be underwriting commissions or discounts. We have agreed to indemnify Ladenburg against specified liabilities, including liabilities under the Securities Act, or to contribute to payments that Ladenburg may be required to make because of those liabilities.

The offering of shares of our common stock pursuant to the equity distribution agreement will terminate upon the earlier of (1) the sale of all common stock subject to the agreement or (2) termination of the equity distribution agreement. The equity distribution agreement may be terminated by Ladenburg at any time upon ten days notice to us or by us at any time upon thirty days notice to Ladenburg, or by Ladenburg at any time in certain circumstances, including our failure to maintain a listing of our common stock on the Nasdaq Capital Market or the occurrence of a material adverse change in our company.

## Legal Matters

The validity of the common stock being offered hereby will be passed upon by Winstead PC, The Woodlands, Texas. Jeffrey R. Harder, a member of the law firm, beneficially owned as of February 26, 2010, an aggregate of 11,899 shares of our common stock. Mr. Harder also holds options to purchase 52,500 shares of our common stock.

## Experts

The consolidated financial statements 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, 2008 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.

## Where You Can Find More Information

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the shares of common stock we are offering under this prospectus supplement. This prospectus supplement and the accompanying prospectus do not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus supplement, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. We also file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement, as well as any other material we file with the SEC, at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information on 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 Repros. The SEC's Internet site can be found at http://www.sec.gov.

## Important Information Incorporated By Reference

The SEC allows us to "incorporate by reference" into this prospectus supplement the information we file with it, which means that we can disclose important information to you by referring you to those documents. Information incorporated by reference is part of this prospectus supplement. Later information filed with the SEC will update and supersede this information. The SEC's Internet site can be found at http://www.sec.gov.

We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until this offering is completed:

- our Annual Report on Form 10-K for the year ended December 31, 2008 filed with the Securities and Exchange Commission on March 16, 2009;

- our Quarterly Reports on Form 10-Q for the quarters ended March 31, June 30, 2009 and September 30, 2009 filed with the Securities and Exchange Commission on May 11, August 17, and November 9, 2009, respectively, as amended by our Quarterly Report on Form 10-Q/A for the quarter ended June 30, 2009 filed with the Securities and Exchange Commission on August 18, 2009;

- our Current Reports on Form 8-K (other than information furnished rather than filed), filed with the Securities and Exchange Commission on January 13, 2009, January 27, 2009, February 3, 2009, February 24, 2009, March 9, 2009, March 12, 2009, March 16, 2009, March 17, 2009, March 20, 2009, April 20, 2009, May 11, 2009, May 20, 2009, May 27, 2009, June 8, 2009, July 2, 2009, July 8, 2009, July 10, 2009, , (as amended by our Current Report on Form 8-K/A filed with the Securities and Exchange Commission on December 22, 2009), July 23, 2009, August 3, 2009, August 7, 2009, August 11, 2009, August 18, 2009, September 10, 2009, September 21, 2009, September 30, 2009, October 14, 2009, November 3, 2009, November 9, 2009, November 10, 2009, November 17, 2009; November 19, 2009, December 21, 2009, January 11, 2010, January 19, 2010, January 26, 2010, January 27, 2010, February 2, 2010, February 8, 2010 and February 19, 2010; and

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

Information furnished to the Securities and Exchange Commission under Item 2.02 or Item 7.01 in Current Reports on Form 8-K, and any exhibit relating to such information, filed prior to, on or subsequent to the date of this prospectus supplement is not incorporated by reference into this prospectus supplement.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to Repros Therapeutics Inc., Attention: Secretary, 2408 Timberloch Place, Suite B-7, The Woodlands, Texas 77380. Our telephone number is (281) 719-3400.

In accordance with Section 412 of the Exchange Act, any statement contained in a document incorporated by reference herein shall be deemed modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement.

PROSPECTUS

$20,000,000

Common Stock
Preferred Stock
Warrants

From time to time, Repros Therapeutics Inc. (“the Company”, "Repros," or "we," "us" or "our") may offer and sell shares of common stock or preferred stock, either individually or represented by warrants. We may also offer common stock issuable upon the conversion of preferred stock. The total amount of these securities will have an initial aggregate offering price of up to $20,000,000. As a result:

§ we will provide this prospectus and a prospectus supplement each time we sell the securities;

§ the prospectus supplement will inform you about the specific terms of that offering and may also add, update or change information contained in this prospectus; and

§ you should read this prospectus and any prospectus supplement, as well as any documents incorporated by reference in this prospectus and any prospectus supplement, carefully before you invest in our securities.

Our common stock is quoted on the NASDAQ Global Market under the trading symbol “RPRX.” On December 30, 2009, the last reported sale price of our common stock on the NASDAQ Global Market was $0.82 per share.

The aggregate market value of our outstanding common stock held by non-affiliates is $16,055,327 based on 25,538,598 shares of outstanding common stock, of which 22,299,065 shares are held by non-affiliates, and a per share price of $0.72 based on the closing sale price of our common stock on December 8, 2009. We have not offered any securities pursuant to General Instruction I.B.6. of Form S-3 during the prior 12 calendar month period that ends on, and includes, the date of this prospectus.

THIS PROSPECTUS MAY NOT BE USED TO OFFER OR SELL ANY SECURITIES UNLESS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

The securities may be sold directly by us to purchasers, to or through underwriters or dealers designated from time to time, or through agents designated from time to time. For additional information on the methods of sale, you should refer to “Plan of Distribution” in this prospectus and to the accompanying prospectus supplement. If any underwriters are involved in a sale of the securities, their names and any applicable commissions or discounts will be set forth in a prospectus supplement. The net proceeds we expect to receive from the sale will also be set forth in a prospectus supplement.

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.

INVESTING IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. YOU SHOULD CAREFULLY CONSIDER THE "RISK FACTORS" CONTAINED IN OUR ANNUAL REPORT ON FORM 10-K FOR THE FISCAL YEAR ENDED DECEMBER 31, 2008, UPDATES IN PART II ITEM 1A OF OUR FORM 10-Q FILINGS AND IN OUR FUTURE FILINGS MADE WITH THE SECURITIES AND EXCHANGE COMMISSION, WHICH ARE INCORPORATED BY REFERENCE IN THIS PROSPECTUS. SEE THE SECTION ENTITLED "RISK FACTORS" ON PAGE 5 OF THIS PROSPECTUS.

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The date of this prospectus is January 5, 2010

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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.

## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission using a "shelf" registration process. Under this shelf registration process, we may offer and sell shares of common stock or preferred stock, either individually or represented by warrants. We may also offer common stock issuable upon the conversion of preferred stock. The total amount of these securities will have an initial aggregate offering price of up to $20,000,000.

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 more specific information about the terms of that offering. We may also add, update or change in the prospectus supplement any of the information contained in this prospectus. This prospectus, together with applicable prospectus supplements, includes all material information relating to this offering. If there is any inconsistency between the information in this prospectus and the information in the accompanying prospectus supplement, you should rely on the information in the prospectus supplement.

Please carefully read both this prospectus and any prospectus supplement together with the additional information described below under "Where You Can Find More Information."

Unless otherwise mentioned or unless the context requires otherwise, all references in this prospectus to "the Company," "Repros," "we," "us," "our" or similar references mean Repros Therapeutics Inc.

## ABOUT REPROS THERAPEUTICS INC.

### Overview

The Company was organized as a Delaware corporation on August 20, 1987. We are a development stage biopharmaceutical company focused on the development of oral small molecule drugs for major unmet medical needs associated with male and female reproductive disorders. The clinical trials relating to Proellex® have been placed on clinical hold by the FDA due to safety-related concerns resulting from elevated liver enzymes in a number of patients enrolled in the clinical trials. Completion of our ongoing clinical trial activities relating to our other product candidate, Androxal®, is subject to, among other things, adequate cash being available.

As of September 30, 2009, we had accumulated losses of $173.1 million, approximately $2.5 million in cash and cash equivalents, and our accounts payable and accrued expenses were approximately $12.2 million. As a result of the October 29, 2009 settlement agreement with certain of our creditors to issue them shares of our common stock and cash as payment in full for our then-outstanding liabilities with such creditors (See "Recent Developments – Settlement with Trade Creditors" below), subsequent to September 30, 2009, we have reduced the amount of our accounts payable and accrued expenses by approximately $8.7 million. Notwithstanding, the amount of cash on hand is not sufficient to continue to fund our ongoing clinical trials of Androxal®, complete all necessary activities relating to the suspension of our clinical trial program for Proellex®, and pay our accounts payable and accrued expenses as well as our normal corporate overhead and expenses. The foregoing and other matters raise substantial doubt about our ability to continue as a going concern.

We continue to explore potential additional financing alternatives that may allow us to maintain our current reduced level of operations; however, there can be no assurance that we will be successful in raising any such additional funds on a timely basis or at all. Significant additional capital will be required for us to continue development of either of

our product candidates. Failure to raise sufficient funds before the second quarter of 2010 will likely result in the filing of bankruptcy and dissolution of the Company.

Our current product candidates consist of the following:

Androxal® (male reproductive health)

We believe our product candidate for male reproductive health, Androxal®, is a new chemical entity. Androxal® is a single isomer of clomiphene citrate and is an orally active proprietary small molecule compound.

We are developing Androxal® for men of reproductive age with low testosterone levels who want to maintain their fertility while being treated for their low testosterone condition. During the second quarter of 2008, we initiated a Phase 2b proof-of-concept clinical trial in which we are monitoring the effects of Androxal® on male fertility and testicular function in patients being treated for low testosterone as compared to Testim®, a popular marketed topical testosterone medication. On October 6, 2009 we announced that Androxal was able to maintain sperm counts in men being treated for their low testosterone levels. Testim® resulted in suppressed sperm levels while men were being treated with that topical gel. We recently submitted a request for a Type C meeting with the FDA and expect to hold a meeting with the FDA in late January, 2010, provided that sufficient funds can be raised to continue development of this product. Given that there is currently an acceptable treatment regimen for men with low testosterone, there is significant uncertainty as to whether or not an additional approach such as Androxal® would be approved by the FDA or accepted in the market. At this time it is too early in the clinical development process to estimate when or even if an NDA for Androxal® will be submitted for this indication.

In April 2008, we submitted a White Paper, based on the results from a previously conducted non-pivotal Phase 2 clinical trial with Androxal® for the treatment of testosterone deficiency due to secondary hypogonadism, to the FDA's Division of Reproductive and Urology Products. The data demonstrated that in subjects with serum glucose levels of greater than 105 mg/dL, there was a statistically significant reduction in fasting serum glucose and a higher response rate in the treatment group with Androxal® as compared with groups receiving either placebo or Androgel®, the current standard of care for the treatment of testosterone deficiency. In November 2008, after the FDA reviewed this paper we received guidance suggesting that we open a new IND with the Division of Metabolic and Endocrine Products, or DMEP, for the investigation of Androxal® as a potential treatment for type 2 diabetes. Provided that sufficient cash is available, we plan to submit a new IND for this indication to the DMEP in the fourth quarter of 2009. Should we raise adequate funds to continue our operations, we anticipate conducting a Phase 2b proof-of-concept clinical trial with Androxal® for glucose regulation after receiving additional feedback from the FDA. At this time it is too early in the clinical development process to estimate when or even if a NDA for Androxal® will be submitted for this indication. The plan to develop Androxal® in this new indication replaces our previously announced plan to develop Androxal® in men with adult-onset idiopathic hypogonadotrophic hypogonadism, or AIHH, with concomitant plasma glucose and lipid elevations, all of which are components of Metabolic Syndrome.

We were previously developing Androxal® in the United States to treat testosterone deficiency due to secondary hypogonadism by restoring normal testosterone production in males with functional testes and diminished pituitary function, a common condition in the aging male. After a Type "C" meeting held with the FDA on October 15, 2007, we believed that there was no clear clinical path to develop Androxal® for this indication in the U.S. Androxal® might be developed outside of the U.S. for this indication if our future financial resources are sufficient.

Proellex® (female reproductive health)

Proellex®, our product candidate for female reproductive health, is a new chemical entity that acts as a selective blocker of the progesterone receptor and is being developed for the treatment of symptoms associated with uterine fibroids and endometriosis. However, as a result of the recent liver toxicity exhibited by Proellex®, all ongoing clinical trial activities have been put on hold by the FDA. There is currently no FDA-approved orally administered drug treatment for the long-term treatment of uterine fibroids or endometriosis.

Our estimates regarding the timing of our Proellex® clinical development program are completely on hold at this time in light of the FDA clinical hold and our recent discontinuation of ongoing clinical trials. In addition, any future development efforts are totally dependent on our ability to raise sufficient capital or find an appropriate partner to proceed and on decisions by the FDA regarding the current clinical hold on Proellex® clinical trials. If the FDA were to lift the clinical hold on Proellex®, and if the FDA requires a lower dosage of Proellex® to be used for future

clinical trials, the Company would be required to commence Phase 2 studies again with the required lower dosage, thereby resulting in extensive additional costs and delays. The length of time required to complete Phase 1, Phase 2 and Phase 3 clinical trials and long-term Open Label Safety Trials may vary substantially according to factors relating to the particular trial, such as the type and intended use of the drug candidate, the clinical, trial design and the ability to enroll suitable patients. We have also, in the past, had difficulty recruiting patients into our Proellex® clinical trials primarily due to the various test procedures that are required, including multiple endometrial biopsies. Recruiting patients would likely be even more difficult due to the recent liver toxicity exhibited by Proellex®.

Business Strategy

Provided we are able to obtain sufficient funds to continue our business, we plan to focus our clinical program on Androxal® to determine if a clear clinical path can be realized with the FDA.

Should the FDA permit the resumption of the Proellex® clinical trials, we will assess whether there are sufficient funds available to continue development ourselves of such product candidate or whether such program would be more appropriately funded by a corporate partner. Therefore, 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 a corporate partnering opportunity will be found.

Risks Affecting Us

Our business is subject to numerous risks as discussed more fully in "Risk Factors" below. We are exploring various financing alternatives to address our short term liquidity needs. No assurance can be given that we will be successful in obtaining financing on acceptable terms or at all. We anticipate that if we are able to secure financing, that such financing will result in significant dilution of the ownership interests of our current 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. In the event that we are unable to obtain adequate financing to meet our short term liquidity needs, we will pursue other options, including but not limited to, reductions of expenses, sale of the Company, sale or license of a portion or all of our assets, a bankruptcy filing or the liquidation of the Company.

In addition, we have recently suspended dosing in the clinical trials of Proellex®, have not received regulatory approval for any of our product candidates, have not successfully earned any significant commercial revenues from any of our product candidates and may never launch either of our product candidates. If we cannot resume dosing in the clinical trials of Proellex® or do not successfully commercialize any of our product candidates, we will be unable to achieve our business objectives. In addition, the reported results of our clinical trials completed to date may not be indicative of results that will be achieved in later-stage clinical trials involving larger and more diverse patient populations. As of September 30, 2009, we had an accumulated deficit of approximately $173.1 million, accounts payable and accrued expenses of approximately $12.2 million and cash and cash equivalents of approximately $2.5 million. As a result of the October 29, 2009 settlement agreement with certain of our creditors to issue them shares of our common stock and cash as payment in full for our then-outstanding liabilities with such creditors (as described below) we have reduced the amount of our accounts payable and accrued expenses by approximately $8.7 million. Notwithstanding, there is a substantial doubt about our ability to continue as a going concern and we expect to continue to incur significant losses over the next several years, and we may never become profitable. Our financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Corporate Information

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.reprosrx.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. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and all amendments to such reports are made available free of charge through the Investor Relations section of our website as soon as reasonably practicable after they have been filed or furnished with the Securities and Exchange Commission.

Recent Developments

General

On September 11, 2009, we completed a direct registered offering of 1.5 million shares of our common stock at a purchase price of $0.65 per share for aggregate proceeds after expenses of approximately $869,000. On October 13, 2009, we completed a direct registered offering of 3.5 million shares of our common stock at a purchase price of $1.27 per share for aggregate proceeds after expenses of approximately $4.1 million. Such registered direct offerings resulted in an aggregate of approximately $5.0 million net proceeds to us. The shares of common stock offered by us in such offerings were registered under our prior shelf registration statement on Form S-3 (File No. 333-155265), which was filed with the Securities and Exchange Commission on November 10, 2008 and declared effective by the

Securities and Exchange Commission on November 26, 2008.

On October 29, 2009, Katherine A. Anderson was engaged as the Chief Accounting Officer of the Company.

Effective October 29, 2009, Dr. Paul Lammers, resigned his position of President.

Effective October 30, 2009, the Company eliminated the position of Senior Vice President of Regulatory and Clinical Affairs held by Dr. Andre van As. The Company is obligated to pay Dr. van As, under his employment contract, salary and benefits for six months. Dr. Jean Fourcroy, member of the Company's Board of Directors and former Medical Officer at the FDA's Division of Reproductive and Urological Products, has agreed to serve as Company's Chief Medical Officer on an as needed basis.

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O n November 6, 2009, the Company received notification from the NASDAQ Stock Market that it has not regained compliance with NASDAQ Listing Rules 5450(b)(2)(A) or 5450(b)(3)(A) and, as a result, its securities will be delisted from the NASDAQ Global Market. Pursuant to the NASDAQ procedural rules, the Company appealed such determination and on December 3, 2009, an oral hearing was held to determine whether its securities will continue to be listed on the NASDAQ Global Market. At such hearing the Company requested that its securities be moved to the NASDAQ Capital Market if the appeal is not successful. On December 15, 2009, the Company received another notification from the NASDAQ Stock Market that it has not regained compliance with NASDAQ Listing Rule 5450(b)(2)(C), which further subjects the Company's securities to delisting from the NASDAQ Stock Market as a result of the market value of its publicly-held shares being below $15 million. The Company previously addressed the deficiency associated with such Listing Rule in its December 3rd oral hearing and is awaiting the decision from NASDAQ Listing Qualifications Panel regarding such deficiency. There can be no assurance that our appeal will be successful to remain on the NASDAQ Global Market or that the Company will be allowed to move its securities to the NASDAQ Capital Market.

On December 15, 2009, the Company also received notice from NASDAQ that its securities did not meet the minimum $1 bid price requirement and that it securities would be delisted if such price was not met, for 10 continuous trading days, within six months of such letter. The Company anticipates that it will have some developments relating to its product candidates on or before such date that could result in the stock price moving above $1 per share, however, there can be no assurance that such result will be successful in achieving compliance with such rule by such date .

On November 12, 2009, Dr. Jaye Thompson was appointed to our board of directors and to serve as a member of the audit committee of our board of directors.

On November 12, 2009, Mark Lappe resigned his position as a member of the Company’s board of directors and chairperson of the board of directors. Nola E. Masterson, a member of the Company’s board of directors since 2004, has been appointed as chairperson of the Company’s board of directors.

On November 16, 2009, our board of directors elected Joseph S. Podolski as President of the Company.

On November 17, 2009, our stockholders approved an amendment to our Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of our common stock from 30 million to 75 million.

Settlement with Trade Creditors

On October 29, 2009, we entered into a Master Settlement Agreement and Releases (the “Settlement Agreement”) with certain trade creditors, pursuant to which we issued 5,361,194 shares of our common stock, at $1.10 per share, and paid approximately $2.77 million in cash to such creditors as payment in full for our then-outstanding liabilities of approximately $8.7 million and for the release of the claims held by and the dismissal of the litigation commenced by such creditors against the Company. On December 4, 2009, we filed a registration statement on Form S-3 to register the resale of the shares of common stock issued under the Settlement Agreement by such creditors. Under the Settlement Agreement, we agreed to refrain from selling any shares for any primary public offering or other offering of our equity securities during the ten business days immediately following the effective date of such registration statement, in order to provide such creditors an opportunity to sell their shares issued under the Settlement Agreement.

## RISK FACTORS

Investment in our securities involves a high degree of risk. You should consider carefully the risk factors in any prospectus supplement and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2008, updates in Part II, Item 1A of our Form 10-Q filings, and in our future filings with the Securities and Exchange Commission, as well as other information in this prospectus and any prospectus supplement and the documents incorporated by reference herein or therein, before purchasing any of our securities. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities.

## 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 ability to continue as a going concern and to raise additional capital before the second quarter of 2010 on acceptable terms or at all;
- our ability to successfully defend the recently filed class action lawsuits;
- our ability to maintain the Company’s listing on the NASDAQ Global Market;
- whether a clear clinical path for Androxal® can be realized;
- the removal of the current clinical hold on further clinical trials for Proellex® by the Food and Drug Administration, or FDA, and the reestablishment of safe dosing in clinical trials for Proellex®;
- having available funding for the continued development of Proellex® and Androxal®;
- 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;
- 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 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,” “p
“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.

## 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.

## DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 75,000,000 shares of common stock and 5,000,000 shares of preferred stock, of which 500,000 shares are designated the Series One Junior Participating Preferred Stock. As of December 30, 2009, 25,538,598 shares of our common stock, par value $0.001 per share, and no shares of our preferred stock, were outstanding.

### Common Stock

The issued and outstanding shares of common stock are, and the shares of common stock that we may issue in the future will be, validly issued, fully paid and nonassessable. Holders of our common stock are entitled to share equally, share for share, if dividends are declared on our common stock, whether payable in cash, property or our securities. The shares of common stock are not convertible and the holders thereof have no preemptive or subscription rights to purchase any of our securities. Upon liquidation, dissolution or winding up of our company, the holders of common stock are entitled to share equally, share for share, in our assets which are legally available for distribution, after payment of all debts and other liabilities and subject to the prior rights of any holders of any series of preferred stock then outstanding. Each outstanding share of common stock is entitled to one vote on all matters submitted to a vote of stockholders. There is no cumulative voting. Except as otherwise required by law or our Restated Certificate of Incorporation, the holders of common stock vote together as a single class on all matters submitted to a vote of stockholders.

Our common stock is currently listed on the NASDAQ Global Market under the symbol “RPRX.”

### Preferred Stock

We may issue shares of preferred stock in series and may, at the time of issuance, determine the designations, preferences, conversion rights, cumulative, relative, participating optional or other rights, preferences and limitations of each series. Satisfaction of any dividend preferences of outstanding shares of preferred stock would reduce the amount of funds available for the payment of dividends on shares of common stock. Holders of shares of preferred stock may be entitled to receive a preference payment in the event of any liquidation, dissolution or winding-up of the Company before any payment is made to the holders of shares of common stock. Upon the affirmative vote of a majority of the total number of directors then in office, our board of directors, without stockholder approval, may issue shares of preferred stock with voting and conversion rights which could adversely affect the holders of shares of common stock.

## DESCRIPTION OF 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.

## 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 reallowed 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 reallowed 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 overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934. Overallotment 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 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 Global 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 Global Market may engage in passive market making transactions in the securities on the NASDAQ Global 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.

## LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon by Winstead PC, The Woodlands, Texas. Jeffrey R. Harder, a member of the law firm Winstead PC, beneficially owned as of December 8, 2009, an aggregate of 11,899 shares of our common stock. Mr. Harder also holds options to purchase 52,500 shares of our common stock.

## EXPERTS

The consolidated financial statements 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 by reference to the Annual Report on Form 10-K for the year ended December 31, 2008 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.

## WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. We have filed with the Securities and Exchange Commission a registration statement on Form S-3 under the Securities Act with respect to the securities we are offering under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits filed as a part of the registration statement. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the Securities and Exchange Commission's public reference room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the Securities and Exchange Commission and paying a fee for the copying cost. Please call the Securities and Exchange Commission at 1-800-SEC-0330 for more information about the operation of the public reference room. Our Securities and Exchange Commission filings are also available at the Securities and Exchange Commission's website at http://www.sec.gov.

The Securities and Exchange Commission allows us to "incorporate by reference" information that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the Securities and Exchange Commission prior to the date of this prospectus, while information that we file later with the Securities and Exchange Commission will automatically update and supersede this information. We incorporate by reference into this registration statement and prospectus the documents listed below and any future filings we will make with the Securities and Exchange Commission under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, after the date of the initial registration statement but prior to effectiveness of the registration statement and after the date of this prospectus but prior to the termination of the offering of the securities covered by this prospectus, except in each case for information contained in any such filing where we indicate that such information is being furnished and is not to be considered "filed" under the Securities Exchange Act of 1934, as amended.

The following documents filed with the Securities and Exchange Commission are incorporated by reference in this prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 2008 filed with the Securities and Exchange Commission on March 16, 2009;

- our Quarterly Reports on Form 10-Q for the quarters ended March 31, June 30, 2009 and September 30, 2009 filed with the Securities and Exchange Commission on May 11, August 17, and November 9, 2009, respectively, as amended by our Quarterly Report on Form 10-Q/A for the quarter ended June 30, 2009 filed with the Securities and Exchange Commission on August 18, 2009;

- our Current Reports on Form 8-K (other than information furnished rather than filed), filed with the Securities and Exchange Commission on January 13, 2009, January 27, 2009, February 3, 2009, February 24, 2009, March 9, 2009, March 12, 2009, March 16, 2009, March 17, 2009, March 20, 2009, April 20, 2009, May 11, 2009, May 20, 2009, May 27, 2009, June 8, 2009, July 2, 2009, July 8, 2009, July 10, 2009, July 23, 2009, August 3, 2009, August 7, 2009, August 11, 2009, August 18, 2009, September 10, 2009, September 21, 2009, September 30, 2009, October 14, 2009, November 3, 2009, November 9, 2009, November 10, 2009, November 17, 2009; November 19, 2009 and December 21, 2009, as amended by our Current Report on Form 8-K/A filed with the Securities and Exchange Commission on December 22, 2009; and

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

Information furnished to the Securities and Exchange Commission under Item 2.02 or Item 7.01 in Current Reports on Form 8-K, and any exhibit relating to such information, filed prior to, on or subsequent to the date of this prospectus is not incorporated by reference into this prospectus.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to Repros Therapeutics Inc., Attention: Secretary, 2408 Timberloch Place, Suite B-7, The Woodlands, Texas 77380. Our telephone number is (281) 719-3400.