REPROS THERAPEUTICS INC.
Form 424B5
January 30, 2012

**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)

2,463,537 Shares of Common Stock

$4.50 Per Share

We are offering 2,463,537 shares of our common stock.

Our common stock is listed on the Nasdaq Capital Market under the symbol “RPRX.” On January 26, 2012, the last reported sale price of our common stock on the Nasdaq Capital Market was $5.11 per share.

The aggregate market value of our outstanding common stock held by non-affiliates is $64,442,673 based on 12,358,444 shares of outstanding common stock, of which 12,298,220 shares are held by non-affiliates, and a per share price of $5.24 based on the closing sale price of our common stock on January 25, 2012. We have offered and sold $203,625 of 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 supplement.

	Per Share	Total
Price to the public	$4.50	$11,085,917
Placement agent’s fees (1)	$0.27	$665,155
Proceeds, before expenses, to Repros Therapeutics Inc.	$4.23	$10,420,762

(1) We have also agreed to reimburse the placement agent for certain of its expenses as described under “Plan of Distribution” herein.

We have engaged Ladenburg Thalmann & Co. Inc. as the exclusive placement agent in connection with this offering. The placement agent is not purchasing or selling any of the shares of common stock in this offering, nor is it required to arrange for the purchase or sale of any specific number or dollar amount of common stock, but has agreed that it will use its commercially reasonable best efforts to arrange for the sale of all 2,463,537 shares of common stock offered. We have agreed to pay placement agent fees equal to 6% of the total purchase price of the common stock placed by the placement agent. See "Plan of Distribution" beginning on page S-13 of this prospectus supplement.

Investing in our common stock involves substantial risks. See "Risk Factors" beginning on page S-5 of this prospectus supplement.

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

We expect to deliver shares against payment in New York, New York on February 1, 2012.

Ladenburg Thalmann & Co. Inc.

The date of this prospectus supplement is January 26, 2012.

Table of Contents

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: (i) this prospectus supplement, which describes the specific details regarding this offering; and (ii) 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 or any document incorporated by reference in this prospectus supplement or 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 the placement agent 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.

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. In 2010, for the first time, 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.

The Company believes 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, which we believe may improve the condition of men suffering from Type 2 diabetes.

We have recently 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. We have since announced top line results of this study that Androxal® was generally well tolerated compared to placebo and there were no drug related serious adverse events that led to discontinuation. We plan to request a Type B meeting in 2012 with the FDA to finalize Phase 3 study design and receive confirmation of the studies to be included in the drug dossier for a New Drug Application submission once the final clinical study reports have been completed. Following such meeting, we plan to proceed with Phase 3 studies conducted under a Special Protocol Assessment.

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® had shown statistically significant results in previous Phase 2 studies for endometriosis and uterine fibroids. We have recently completed a low dose escalating study as permitted by the FDA, which was intended to determine both signals of efficacy and safety for low oral doses of the drug. We recently announced that 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. The FDA has since accepted an Investigational New Drug Application for vaginally delivered Proellex® and, as a result, we plan to commence a Phase 1/2 vaginal administration study for uterine fibroids in the first quarter of 2012. Additionally, we plan to request a Type B meeting with the FDA on completion of the final clinical study report. Based on the present data and the strong efficacy signal in its previous Phase 2 studies, we hope to re-enter Phase 3 with low dose oral Proellex®. We believe a Type B meeting can be scheduled with the FDA during the second quarter of 2012. Following such meeting, we intend to commence a Phase 3 oral administration study for endometriosis in the third quarter of 2012 and, pending the outcome of our planned Phase 1/2 vaginal administration study for uterine fibroids, we intend to commence a Phase 3 vaginal administration study for uterine fibroids in the fourth quarter of 2012.

As of September 30, 2011, we had accumulated losses of $189.0 million, approximately $7.1 million in cash and cash equivalents, and our accounts payable and accrued expenses were approximately $2.0 million. Assuming successful completion of this offering, we believe we will have sufficient funding to conduct the Phase 1/2, 2, 2B and 3 clinical trials either currently underway or planned to commence in 2012 through sometime in the second quarter of 2013; however, significant additional capital will be required for us to complete development of either of our product candidates. We continue to explore potential additional financing alternatives (including corporate partnering opportunities) that would provide sufficient funds to enable us to continue to develop our two product candidates through completion of all necessary clinical trials; however, there can be no assurance that we will be successful in raising any such additional funds on a timely basis or at all. The foregoing matters raise substantial doubt about our ability to continue as a going concern.

Our Research and Development Program

Our product development pipeline is summarized in the table below:

Product Candidate (Indication)	Status	Next Expected Milestone(s)
Androxal®		
Secondary Hypogonadism	Phase 2B	Commence Phase 3 study (Q2 2012)
Proellex®		
		Commence a Phase 1/ 2 study (vaginal delivery) (Q1 2012)
Uterine Fibroids	Phase 2	Commence Phase 3 study (vaginal delivery) (Q4 2012)
Endometriosis		Commence Phase 3 study (oral delivery) (Q3 2012)
	Phase 2	

Recent Developments

Effective December 30, 2011, the Company and its President and Chief Executive Officer, Joseph S. Podolski, entered into a Fifth Amendment (the "Fifth Amendment") to the Employment Agreement dated January 1, 1993 by and between the Company and Mr. Podolski. The Fifth Amendment provides that the term of the agreement shall be extended until May 31, 2014.

On October 27, 2011, our board of directors increased the size of the board of directors from five to six members and elected Dr. Michael Wyllie as a director of the Company to fill the vacancy created by such increase. In connection with Dr. Wyllie's election to the board of directors, he was granted an option to purchase 40,000 shares of the Company's common stock at an exercise price equal to the closing price per share for the Company's common stock on the Nasdaq Capital Market on the date of such election. Such option will vest and become exercisable at a rate of one-twelfth (1/12) at the end of each quarter for the three (3) year period following the date of Dr. Wyllie's election to the board of directors, based on continuing service to the Company.

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.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 or of the accompanying prospectus.

The Offering

Common stock offered by the Company	2,463,537 shares
Offering price	$4.50 per share.
Common stock outstanding prior to this offering	12,317,692 shares.
Common stock to be outstanding after this offering	14,781,229 shares.
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.
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 September 30, 2011, and does not include:

- 1,821,025 shares of common stock issuable upon the exercise of outstanding options at a weighted average exercise price of $7.03 per share;
- 755,841 shares of common stock available for future issuance under our stock option plans;
- 3,439,770 shares of common stock issuable upon exercise of our warrants, 1,690,500 of which are exercisable for $2.49 per share and 1,749,270 of which are exercisable for $0.01 per share; or
- 40,752 shares of common stock sold by the Company since September 30, 2011 pursuant to the terms of that certain Equity Distribution Agreement dated February 12, 2010 by and between the Company and Ladenburg Thalmann & Co. Inc. at a weighted average exercise price of $5.00 per share.

Selected Financial Data

The following tables summarize our financial data for the periods presented. The summary statements of operations data for the years ended December 31, 2010, 2009 and 2008, and the balance sheet data as of December 31, 2010 and 2009, have been derived from our audited financial statements, which are incorporated by reference into this prospectus supplement. The summary statements of operations data for the years ended December 31, 2007 and 2006, and the balance sheet data as of December 31, 2008, 2007 and 2006, have been derived from our audited financial statements, which are not incorporated by reference into this prospectus supplement. The summary statements of operations data for the nine months ended September 30, 2011 and 2010, and the balance sheet data as of September 30, 2011, have been derived from our unaudited financial statements, which are incorporated by reference into this prospectus supplement. The historical results are not necessarily indicative of the results to be expected for any future periods. You should read this data together with the financial statements and related notes incorporated by reference into this prospectus supplement or included elsewhere in this prospectus supplement, as well as “Management's Discussion and Analysis of Financial Condition and Results of Operations” and the other financial information incorporated by reference into this prospectus supplement.

STATEMENTS OF OPERATIONS DATA:

	Year Ended December 31,					Nine Months Ended September 30,	
	2010	2009	2008	2007	2006	2011	2010
Revenues and Other Income	(In thousands, except per share data)						
Interest income	$—	$4	$433	$1,508	$596	$1	$—
Other income	421	547	—	—	—	—	138
Total revenues	421	551	433	1,508	596	1	138
Expenses:							
Research and development	2,904	23,062	22,575	12,420	11,912	6,980	1,950
General and administrative	2,285	4,723	3,060	2,788	2,879	2,780	1,772
Total expenses	5,189	27,785	25,635	15,208	14,791	9,760	3,722
Net loss	$(4,768)	$(27,234)	$(25,202)	$(13,700)	$(14,195)	$(9,759)	$(3,584)
Net loss per share – basic and diluted (1)(2)	$(0.59)	$(6.28)	$(7.54)	$(4.38)	$(5.60)	$(0.82)	$(0.46)
Shares used in loss per share calculation(2)	8,057	4,336	3,343	3,131	2,537	11,840	7,763

(1)

See "Note 2. Summary of Significant Accounting Policies" of Notes to our Consolidated Financial Statements incorporated by reference into this prospectus for a description of the computation of loss per share.

(2) The basic and diluted net loss per share and shares used in loss per share calculation have been adjusted to reflect the one-for-four reverse stock split that was effected on October 14, 2010.

BALANCE SHEET DATA:

	As of December 31,					As of September 30,	
	2010	2009	2008	2007	2006	2011	2010
Cash, cash equivalents and marketable securities	$2,957	$1,886	$19,470	$25,903	$6,736	$7,070	$4,216
Total assets	4,465	2,960	22,603	27,599	7,849	8,616	5,567
Deficit accumulated during the development stage	(179,244)	(174,476)	(147,242)	(122,040)	(108,340)	(189,003)	(178,060)
Total stockholders' equity	$3,167	$562	$15,614	$24,060	$3,790	$6,574	$4,213

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, 2010 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

Assuming completion of this offering, our ability to continue as a going concern may require that we raise additional funds no later than the second quarter of 2013, without which we may need to cease our business operations and begin liquidation proceedings.

Assuming completion of this offering, our ability to continue as a going concern is dependent upon our ability to obtain additional financing no later than the second quarter of 2013 based upon our current expense and revenue assumptions. If our expenses are greater than expected or our revenues are less 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 after this offering 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 purchasers of securities in this offering, 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.

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 September 30, 2011, we had accumulated losses of $189.0 million, approximately $7.1 million in cash and cash equivalents, and our accounts payable and accrued expenses were approximately $2.0 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.

Risks Related to this Offering and our Common Stock

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

We will have broad discretion in the application of the net proceeds from this offering and could allocate the net proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates and cause the price of our common stock to decline.

Purchasers in this offering will experience immediate and substantial dilution.

As of September 30, 2011, we had a net tangible book value of $5.2 million, which yields a net tangible book value of approximately $0.42 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 S-12 of this prospectus supplement. The exercise of outstanding options and 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, 2009 through January 26, 2012, the sale price of our stock price has fluctuated from a low of $1.11 to a high of $55.76. The market price for our common stock will be affected by a number of factors, including:

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

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

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

Ÿ the performance of third-party manufacturers and suppliers;

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

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

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

Ÿ additions or departures of key scientific or management personnel;

Ÿ

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

Ÿ trading volume of our common stock;

Ÿ investor perceptions about us and our industry;

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

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

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

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

Ÿ the other factors described elsewhere in these "Risk Factors" or the section titled "Risk Factors" contained in our most recent Annual Report on Form 10-K for the year ended December 31, 2010 and 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 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 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 may be recommended for delisting (subject to any appeal we would file). If our common stock were delisted, it could be more difficult to buy or sell our common stock and to obtain accurate quotations, and the price of our common stock could suffer a material decline. Delisting would also impair our ability to raise capital.

Forward-Looking Statements

Some of the statements contained in this prospectus supplement, the accompanying prospectus or incorporated herein by reference into this prospectus supplement are forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and are subject to the safe harbor created by the Securities Litigation Reform Act of 1995. The words "believe," "should," "predict," "future," "may," "will," "estimate," "continue," "anticipate," "intend," "plan," "expect," "potential," "continue," or "opportuni negative thereof, or other words and terms of similar meaning, as they relate to us, our business, prospects, future financial or operating performance or our management, are intended to identify forward-looking statements. While forward-looking statements made by us are based on our current intent, belief, judgment, assumptions, estimates and projections and are believed by us to be reasonable, they are subject to risks and uncertainties, many of which are beyond our control. These risks and uncertainties could cause actual results, performance or achievements to vary materially from the forward-looking statements, including the following risks and uncertainties:

- our ability to continue as a going concern and to raise additional capital, as necessary, on acceptable terms or at all;
- having available funding for the continued development of Proellex® and Androxal®;
- the success of the clinical trials for Proellex® and Androxal®;
- the removal of the current partial clinical hold on further clinical trials for Proellex® by the FDA and the re-establishment of safe dosing in clinical trials for Proellex®;
- changes in regulations and the adoption of new regulations;
- delays in conducting or completing clinical trials and the results of our clinical trials;
- uncertainty related to our ability to obtain approval of our products by the FDA and regulatory bodies in other jurisdictions;
- uncertainty relating to certain of our patents, future patent and other intellectual property infringement claims by third parties and our inability to protect our intellectual property;
- 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
- the other risks and uncertainties described under "Risk Factors" in this prospectus supplement or the section titled "Risk Factors" contained in our most recent Annual Report on Form 10-K for the year ended December 31, 2010 and our other public filings.

You should consider the risks above carefully in addition to other information contained in this prospectus supplement and accompanying prospectus before purchasing our common stock. If any of these risks occur, they could seriously harm our business, prospects, financial condition and 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.

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 will 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.

Given these risks and uncertainties, you are cautioned not to place undue reliance on such forward-looking statements.

Use of Proceeds

We expect to receive approximately $10.3 million in net proceeds from the sale of the 2,463,537 shares of common stock offered by us in this offering based on the offering price of $4.50 per share. "Net proceeds" is what we expect to receive after paying the expenses of this offering, including the placement agent fees as described in "Plan of Distribution" 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.

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. 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
2009		
First Quarter	$55.76	$23.36
Second Quarter	33.20	22.80
Third Quarter	24.04	2.60
Fourth Quarter	9.92	2.56
2010		
First Quarter	$4.88	$2.52
Second Quarter	4.52	1.44
Third Quarter	2.68	1.12
Fourth Quarter	4.56	1.11
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 (January 1st through January 26th)	$5.36	$4.09

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 January 26, 2012, the last sale price of our common stock, as reported by the Nasdaq Capital Market, was $5.11 per share. On September 30, 2011, there were approximately 160 holders of record and approximately 3,300 beneficial holders of our common stock.

Dividend Policy

General

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.

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 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.

Dilution

Our unaudited net tangible book value as of September 30, 2011 was approximately $5.2 million, or approximately $0.42 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.

After giving effect to the sale of 2,463,537 shares of common stock to be sold in this offering at the offering price of $4.50 per share, and after deduction of placement agent fees and offering expenses payable by us, our pro forma net tangible book value as of September 30, 2011 would have been approximately $15.5 million, or $1.05 per share. 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 of common stock offered under this prospectus supplement to the number of shares outstanding.

The following table illustrates the pro forma increase in net tangible book value attributable to existing stockholders of $0.63 per share and the dilution (the difference between the offering price per share and net tangible book value per share) to new investors:

Offering price per share		$4.50
Net tangible book value per share as of September 30, 2011	$ 0.42	
Increase in net tangible book value attributable to this offering	0.63	
Pro forma net tangible book value per share as of September 30, 2011, after giving effect to this offering		1.05
Dilution per share to new investors of this offering		$3.45

The number of shares in the table above excludes as of September 30, 2011:

· 1,821,025 shares of common stock issuable upon the exercise of outstanding options at a weighted average exercise price of $7.03 per share;

· 755,841 shares of common stock available for future issuance under our stock option plans;

· 3,439,770 shares of common stock issuable upon exercise of our warrants, 1,690,500 of which are exercisable for $2.49 per share and 1,749,270 of which are exercisable for $0.01 per share; or

- 40,752 shares of common stock sold by the Company since September 30, 2011 pursuant to the terms of that certain Equity Distribution Agreement dated February 12, 2010 by and between the Company and Ladenburg Thalmann & Co. Inc. at a weighted average exercise price of $5.00 per share.

Plan of Distribution

We are offering shares of our common stock through a placement agent pursuant to this prospectus supplement. Subject to the terms and conditions contained in the placement agency agreement, dated January 26, 2012, Ladenburg Thalmann & Co. Inc. has agreed to act as the placement agent for the sale of up to 2,463,538 shares of our common stock. The placement agent is not purchasing or selling any of the shares of common stock in this offering, nor is it required to arrange for the purchase or sale of any specific number or dollar amount of common stock, but has agreed that it will use its commercially reasonable best efforts to arrange for the sale of all 2,463,538 shares of common stock offered.

The placement agency agreement provides that the obligations of the placement agent and the investors are subject to certain conditions precedent, including the absence of any material adverse change in our business and the receipt of customary legal opinions, letters and certificates.

Confirmations and definitive prospectuses will be distributed to all investors who agree to purchase shares of our common stock, informing investors of the closing date as to such shares of our common stock. We currently anticipate that closing of the sale of 2,463,537 shares of our common stock will take place on or about February 1, 2012, subject to the satisfaction of customary closing conditions. Investors will also be informed of the date and manner in which they must transmit the purchase price for their shares of common stock.

On the scheduled closing date, the following will occur:

· we will receive funds in the amount of the aggregate purchase price;

· Ladenburg Thalmann & Co. Inc. will receive the placement agent’s fee in accordance with the terms of the placement agency agreement; and

· we will deliver the shares of common stock to the investors.

We will pay the placement agent an aggregate commission equal to six percent (6.0%) of the gross proceeds of the sale of our common stock in this offering. We will also reimburse the placement agent for actual expenses of its legal counsel incurred in connection with this offering in an amount not to exceed $50,000. In no event will the total amount of compensation paid to the placement agent or any other member of FINRA or independent broker-dealer upon completion of this offering exceed 8% of the gross proceeds of the offering. The estimated offering expenses payable by us, in addition to (x) the placement agent’s fee of $665,155 and (y) reimbursement of the actual expenses of the placement agent’s legal counsel as described above, are approximately $75,000, which includes legal, accounting and printing costs and various other fees associated with registering and listing the common stock. After deducting certain fees due to the placement agent and our estimated offering expenses, we expect the net proceeds from this offering to be approximately $10.3 million.

The following table shows the per share and total fees we will pay to the placement agent in connection with the sale of the common stock offered pursuant to this prospectus supplement and the accompanying prospectus.

	Per Share	Total
Placement agent’s fee	$0.27	$665,155

Because there is no minimum offering amount required as a condition to closing in this offering, the actual total offering fees, if any, are not presently determinable and may be substantially less than the maximum amount set forth

above.

We have agreed to indemnify the placement agent against certain liabilities, including liabilities under the Securities Act of 1933, as amended, and liabilities arising from breaches of representations and warranties contained in the placement agency agreement. We have also agreed to contribute to payments the placement agent may be required to make in respect of such liabilities.

The placement agency agreement is included as an exhibit to our Current Report on Form 8-K that we have filed with the SEC in connection with this offering.

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

Our common stock is listed on the Nasdaq Capital Market under the symbol “RPRX.”

Legal Matters

The validity of the securities being offered hereby will be passed upon by Winstead PC, The Woodlands, Texas. Certain legal matters will be passed upon for the placement agent by Schulte Roth & Zabel LLP, New York, New York.

Experts

The consolidated financial statements incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2010 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, 2010, 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 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 following information or documents that we have filed with the SEC which shall not include, in each case, documents, or information deemed to have been furnished and not filed in accordance with SEC rules:

- Annual Report of Form 10-K for the fiscal year ended December 31, 2010;
- Quarterly Reports on Form 10-Q for the quarters ended March 31, 2011, June 30, 2011 and September 30, 2011;
- Proxy Statement on Schedule 14A filed with the SEC on April 15, 2011;
- Current Reports on Form 8-K filed with the SEC on January 3, 2011, February 9, 2011, March 4, 2011, March 15, 2011, March 16, 2011, March 18, 2011, March 28, 2011, April 1, 2011, May 2, 2011, May 16, 2011, May 18, 2011, June 3, 2011, June 6, 2011, June 23, 2011, August 4, 2011, August 9, 2011, September 1, 2011, September 7, 2011, September 8, 2011, September 12, 2011, September 20, 2011, October 28, 2011, November 7, 2011, November 10, 2011, November 14, 2011, December 12, 2011, December 14, 2011, December 23, 2011, December 27, 2011, January 3, 2012, January 4, 2012, January 5, 2012 and January 13, 2012.

- the description of our Rights Agreement contained in our registration statement on Form 8-A filed on September 3, 1999, as amended on September 6, 2002, October 30, 2002, June 30, 2005, January 10, 2008, October 10, 2008 and September 9, 2010, including any amendments or reports filed for the purposes of updating this description; and

- 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.

Information furnished to the SEC under Item 2.02 or Item 7.01 in Current Reports on Form 8-K, and any exhibit relating to such information is not incorporated by reference into this prospectus supplement.

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

We will provide to each person, including any beneficial owner, to whom a prospectus supplement is delivered, without charge upon written or oral request, a copy of any or all of the reports or documents that are incorporated by reference into this prospectus supplement but not delivered with the prospectus supplement, including exhibits which are specifically incorporated by reference into such documents. If you would like to request documents from us, please send a request in writing or by telephone to us at the following address:

Repros Therapeutics Inc.

2408 Timberloch Place, Suite B-7

The Woodlands, Texas 77380

(281) 719-3400

Attn: Secretary

These documents are posted on our Web site at www.reprosrx.com; select the “Investors & Media” link and then the “SEC Filings” link. Any other information contained on, or accessible through, our website does not constitute a part of this prospectus supplement.

S-15

Information contained herein is subject to completion or amendment. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. These securities may not be sold nor may offers to buy be accepted prior to the time the registration statement becomes effective. This prospectus shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.

Subject to completion. Dated January 5, 2010.

PROSPECTUS

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$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

Table of Contents

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 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.

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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.

On 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 8, 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;
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- 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 Securites 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.

2,463,537 Shares of Common Stock

$ 4.50 Per Share

PROSPECTUS SUPPLEMENT
January 26, 2012

Ladenburg Thalmann & Co. Inc.