

REPROS THERAPEUTICS INC.
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Registration No. 333-197253

PROSPECTUS SUPPLEMENT

(To Prospectus dated June 23, 2016)

Repros Therapeutics Inc.

\$10,000,000

Common Stock

We have entered into a sales agreement with Ladenburg Thalmann & Co. Inc., or Ladenburg, relating to shares of our common stock, par value \$0.001 per share, offered by this prospectus supplement and the accompanying underlying prospectus. Under the sales agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$10,000,000 from time to time at prevailing market prices through Ladenburg as our sales agent.

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

Ladenburg, as our sales agent, may sell our common stock under this prospectus supplement and the accompanying prospectus, in sales deemed to be an "at the market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended (the "Securities Act"), including sales made from time to time directly on or through the Nasdaq Capital Market, on any other existing trading market for our common stock, to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or in any other method permitted by law. Ladenburg will act as sales agent on a commercially reasonable efforts basis consistent with its normal trading and sales practices. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Ladenburg will be entitled to compensation at a fixed commission rate equal to three percent (3.0%) of the gross proceeds per share sold. In connection with the sale of the common stock on our behalf, Ladenburg may be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation of Ladenburg may be deemed to be underwriting commissions or discounts.

INVESTING IN OUR SECURITIES INVOLVES RISKS. YOU SHOULD REVIEW CAREFULLY THE RISKS AND UNCERTAINTIES DESCRIBED UNDER THE HEADING "RISK FACTORS" ON PAGE S-4 OF THIS PROSPECTUS SUPPLEMENT AND UNDER SIMILAR HEADINGS IN THE OTHER DOCUMENTS THAT ARE INCORPORATED BY REFERENCE INTO THIS 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 supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Ladenburg Thalmann

Prospectus Supplement dated August 9, 2016.

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You should rely only on the information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not, and the sales agent has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the sales agent is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying

prospectus, and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus in their entirety before making an investment decision. You also should read and consider the information in the documents to which we have referred you in the section of this prospectus supplement entitled “Information Incorporated by Reference” and the sections of the accompanying prospectus entitled “Information Incorporated by Reference” and “Where You Can Find More Information.”

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus form a part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “Commission”) utilizing a “shelf” registration process. This document contains two parts. The first part consists of this prospectus supplement, which provides you with specific information about this offering. The second part, the accompanying prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer only to the “prospectus,” we are referring to both parts combined. This prospectus supplement may add to, update or change information contained in the accompanying prospectus. To the extent that any statement we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference herein or therein, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference herein and therein.

For investors outside the United States, we have not done anything that would permit this offering or possession or distribution of this prospectus supplement in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus supplement outside of the United States.

As permitted by the rules and regulations of the Commission, the registration statement, of which this prospectus supplement and the accompanying prospectus form a part, includes additional information not contained in this prospectus supplement or the accompanying prospectus. You may read the registration statement and the other reports we file with the Commission at the Commission's web site or at the Commission's offices described below under the heading “Where You Can Find Additional Information.”

Trademarks, service marks or trade names of any other companies appearing in this prospectus supplement are the property of their respective owners. Use or display by us of trademarks, service marks or trade names owned by others is not intended to and does not imply a relationship between us and, or endorsement or sponsorship by, the owners of the trademarks, service marks or trade names.

Cautionary Note Regarding Forward-Looking Information

This prospectus supplement and the documents incorporated herein by reference, in particular the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” incorporated herein by reference, contain certain “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”). These forward-looking statements represent our expectations, beliefs, intentions or strategies concerning future events, including, but not limited to, any statements regarding our assumptions about financial performance; the continuation of historical trends; the sufficiency of our cash balances for future liquidity and capital resource needs; the expected impact of changes in accounting policies on our results of operations, financial condition or cash flows; anticipated problems and our plans for future operations; and the economy in general or the future of the medical device industry, all of which are subject to various risks and uncertainties.

When we use in this prospectus supplement as well as in reports, statements, and information we have filed with the Commission, in our press releases, in presentations to securities analysts or investors, or in oral statements made by or with the approval of an executive officer, the words or phrases “believes,” “may,” “will,” “expects,” “should,” “continue,” “anticipates,” “intends,” “will likely result,” “estimates,” “projects” or similar expressions and variations thereof, we intend to identify forward-looking statements. However, any statements contained in this prospectus supplement that are not statements of historical fact may be deemed to be forward-looking statements. We caution that these statements by their nature involve risks and uncertainties, certain of which are beyond our control, and actual results may differ materially depending on a variety of important factors.

PROSPECTUS SUPPLEMENT SUMMARY

The following summary highlights some of the information contained elsewhere in this prospectus supplement or the accompanying prospectus or incorporated by reference herein or therein. Because this is only a summary, however, it does not contain all of the information that may be important to you. You should carefully read this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference, which are described under “Information Incorporated by Reference” in this prospectus supplement and under “Information Incorporated by Reference” and “Where You Can Find More Information” in the accompanying prospectus. You also should carefully consider the matters discussed in the section entitled “Risk Factors” in the accompanying prospectus and in other periodic reports incorporated herein by reference.

Company Overview

Repros Therapeutics Inc. (the “Company,” “Repros,” or “we,” “us” or “our”) was organized on August 20, 1987. We are a 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, while as discussed below, we faced some challenges with respect to our enclomiphene product candidate, we continue to believe the studies presently underway will ultimately place both programs on a clear late stage clinical development path.

We are developing enclomiphene, a single isomer of clomiphene citrate which is an orally active proprietary small molecule compound. Enclomiphene is intended for the treatment of secondary hypogonadism in overweight men wishing to restore normal testicular function. Men with secondary hypogonadism exhibit low testosterone levels due to under-stimulated testes but they are generally fertile. Enclomiphene is designed to treat the underlying mechanism, insufficient stimulation of the testes by the pituitary, which causes secondary hypogonadism. Secondary hypogonadism due to being overweight or obese is the single greatest cause of hypogonadism in general.

We are also developing Proellex®, an orally administered selective blocker of the progesterone receptor in women, for the treatment of uterine fibroids and endometriosis. Uterine fibroids and endometriosis affect millions of women of reproductive age. Proellex® has shown statistically significant results in previous Phase 2 studies for endometriosis and uterine fibroids. We completed a low dose escalating study as permitted by the FDA in late 2011, to determine both signals of efficacy and safety for low oral doses of the drug. There was no evidence of elevations of liver enzymes over baseline, suggesting these lower doses avoid the type of adverse events seen at much higher doses in earlier studies.

Risks Associated with our Business

We have experienced substantial operating losses since inception. As of June 30, 2016, we had accumulated losses of \$311.4 million, approximately \$12.5 million in cash and cash equivalents, and accounts payable and accrued expenses of approximately \$2.3 million, in the aggregate. We anticipate that our current liquidity will be sufficient to continue the development of our product candidates into the first quarter of 2017. 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 FDA approval; 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 Contact Information

Our executive offices are located at 2408 Timberloch Place, Suite B-7, The Woodlands, Texas. Our telephone number is (281) 719-3400. Our website address is www.reprosrx.com. Our website and the information contained on our website are not incorporated by reference into this prospectus supplement, the accompanying prospectus or the registration statement of which it forms a part.

THE OFFERING

Common stock offered by us	Shares having an aggregate offering price of up to \$10,000,000.
Manner of offering	“At the market offering” in which sales may be made from time to time at prevailing market prices through our sales agent, Ladenburg Thalmann & Co. Inc. See “Plan of Distribution” beginning on page S-6 of this prospectus supplement.
Common stock to be outstanding after this offering	Up to 28,970,607 shares, assuming a sales price of \$2.15 per share, which was the closing price on the Nasdaq Capital Market on August 8, 2016. Actual number of shares issued and outstanding will vary depending on the sales price under this offering.
Use of proceeds	We intend to use the net proceeds from this offering for general corporate purposes. See “Use of Proceeds” on page S-4 of this prospectus supplement.
Nasdaq Capital Market symbol	“RPRX”
Risk factors	This investment involves a high degree of risk. See the information set forth in “Risk Factors” beginning on page S-4 of this prospectus supplement and in the underlying prospectus and the documents incorporated by reference into this prospectus supplement and the underlying prospectus.

The number of shares of common stock to be outstanding immediately after this offering is based on 24,319,444 shares outstanding on June 30, 2016 and excludes as of that date:

· 2,664,024 shares of common stock issuable upon exercise of outstanding stock options under our stock incentive plans at a weighted average exercise price of \$8.53 per share;

· 677,468 additional shares of common stock reserved for future issuance under our stock incentive plans.

Except as otherwise noted, all information in this prospectus supplement reflects the public offering price of \$2.15 per share, which was the last reported sale price of our common stock on the Nasdaq Capital Market on August 8, 2016.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described below and discussed in the section titled “Risk Factors” in our most recent Annual Report on Form 10-K, as well as the risks, uncertainties and additional information set forth in our Commission reports on Forms 10-K, 10-Q and 8-K and in other documents incorporated by reference in this prospectus supplement. The risks described in such documents are not intended to be an all-inclusive list of the potential risks relating to an investment in our securities. Any of such risk factors could significantly and adversely affect our business, prospects, financial condition and results of operations. Additional risks and uncertainties not currently known or that are currently considered to be immaterial may also materially and adversely affect our business. As a result, the trading price or value of our securities could be materially adversely affected and you may lose all or part of your investment.

Risks Related to This Offering

Our independent registered public accounting firm may conclude that there is substantial doubt regarding our ability to continue as a going concern.

Regardless of the amount of the net proceeds that we receive from this offering, if any, our independent registered public accounting firm may conclude, in connection with the audit of our consolidated financial statements for the year ended December 31, 2016, or any other subsequent period, that there is substantial doubt regarding our ability to continue as a going concern. If our independent registered public accounting firm issues a “going concern” opinion, it could impair our ability to finance our operations through the sale of equity, incurring debt, or other financing alternatives. If we fail to raise sufficient additional capital, we will not be able to completely execute our business plan. As a result, our business would be jeopardized and we may not be able to continue. If we ceased operations, it is likely that purchasers of our common stock would lose their entire investment.

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

Because we have not designated the amount of net proceeds from this offering to be used for any particular purpose, our management will have broad discretion as to the application of the net proceeds from this offering, as described below in “Use of Proceeds,” and could use them for purposes other than those contemplated at the time of the offering. Our management may use the net proceeds for corporate purposes that may not improve our financial condition or market value of our common stock.

Future sales of substantial amounts of our common stock, or the possibility that such sales could occur, could adversely affect the market price of our common stock.

We may issue up to \$10,000,000 in aggregate offering price of shares of common stock from time to time in this offering. The issuance from time to time of shares in this offering, as well as our ability to issue such shares in this offering, could have the effect of depressing the market price or increasing the market price volatility of our common stock.

USE OF PROCEEDS

We estimate that the net proceeds that we will receive from this offering will be approximately \$9.6 million, after commissions and estimated expenses payable by us, assuming the sale of an aggregate of \$10,000,000 of our common stock pursuant to this offering, which is the maximum dollar amount of gross proceeds for which we may offer our common stock under this prospectus supplement.

We currently intend to use the net proceeds from this offering for general corporate purposes, including for research and development, sales and marketing initiatives, general and administrative expenses, working capital and capital expenditures.

We have not determined the amount of net proceeds from this offering that we will use specifically for the foregoing purposes. Pending use of the net proceeds, we intend to invest the proceeds in a variety of capital preservation instruments, including short-term, investment-grade, interest-bearing instruments.

DILUTION

If you purchase shares of our common stock in this offering, you will experience dilution to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock immediately after this offering. Our net tangible book value as of June 30, 2016 was approximately \$10.5 million, or approximately \$0.43 per share. Net tangible book value per share represents our total tangible assets less total tangible liabilities, divided by the number of shares of common stock outstanding as of June 30, 2016.

After giving effect to the assumed sale by us of \$10,000,000 of our common stock in this offering at an assumed public offering price of \$2.15 per share of our common stock (the last reported sale price of our common stock on the Nasdaq Capital Market on August 8, 2016), and after deducting the estimated fees and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2016 would have been approximately \$20.0 million or approximately \$0.69 per share of common stock. This represents an immediate increase in net tangible book value of approximately \$0.26 per share to existing shareholders and an immediate dilution of approximately \$1.46 per share to new investors. The following table illustrates this per share dilution:

Assumed public offering price per share	\$2.15
Net tangible book value per share as of June 30, 2016	\$0.43
Increase in net tangible book value per share attributable to new investors	\$0.26
As adjusted net tangible book value per share as of June 30, 2016, after giving effect to this offering	\$0.69
Dilution per share to new investors in the offering	\$1.46

The table above assumes for illustrative purposes that an aggregate of 4,651,163 shares of our common stock are sold at a price of \$2.15 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on August 8, 2016, for aggregate gross proceeds of \$10,000,000. The shares, if any, sold in this offering will be sold from time to time at various prices. An increase of \$0.50 per share in the price at which the shares are sold from the assumed offering price of \$2.15 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$10,000,000 is sold at that price, would increase our adjusted net tangible book value per share after this offering to \$0.71 per share and would increase the dilution in net tangible book value per share to new investors in this offering to \$1.94 per share, after deducting commissions and estimated aggregate offering expenses

payable by us. A decrease of \$0.50 per share in the price at which the shares are sold from the assumed offering price of \$2.15 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$10,000,000 is sold at that price, would decrease our adjusted net tangible book value per share after this offering to \$0.66 per share and would decrease the dilution in net tangible book value per share to new investors in this offering to \$0.99 per share, after deducting commissions and estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only.

The above discussion and table are based on 24,319,444 shares of our common stock outstanding as of June 30, 2016 and exclude the following, as of that date:

2,664,024 shares of common stock issuable upon exercise of outstanding stock options under our stock incentive plans at a weighted average exercise price of \$8.53 per share;

677,468 additional shares of common stock reserved for future issuance under our stock incentive plans.

PLAN OF DISTRIBUTION

We have entered into a sales agreement with Ladenburg, under which we may issue and sell from time to time up to \$10,000,000 of our common stock through Ladenburg as our sales agent. Upon our delivery of a placement notice to Ladenburg pursuant to the sales agreement and subject to the terms of the sales agreement, Ladenburg may sell our common stock by any method in sales deemed to be an “at the market” offering as defined in Rule 415 promulgated under the Securities Act, including sales made from time to time directly on or through the Nasdaq Capital Market, on any other existing trading market for our common stock, to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or in any other method permitted by law.

Ladenburg will offer our common stock at prevailing market prices subject to the terms and conditions of the sales agreement as agreed upon by us and Ladenburg. We will designate the number of shares which we desire to sell, the time period during which sales are requested to be made, any limitation on the number of shares that may be sold in one day and any minimum price below which sales may not be made. Subject to the terms and conditions of the sales agreement, Ladenburg will use its commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us. Either Ladenburg or we may suspend the offering of our common stock being made under the sales agreement upon proper notice to the other party.

We will pay commissions to Ladenburg for their services in acting as agent in the sale of our common stock at a commission rate equal to 3.0% of the gross sale price per share sold. We estimate that the total expenses for this offering, excluding commissions payable under the sales agreement, will be approximately \$135,500. We have agreed to reimburse Ladenburg their reasonable out-of-pocket expenses, including attorneys’ fees in an amount not to exceed \$40,000 in the aggregate, which amount is included in the estimated total expenses for this offering.

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

In connection with the sale of the common stock on our behalf, Ladenburg may be deemed to be underwriters within the meaning of the Securities Act, and the compensation may be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to Ladenburg against certain civil liabilities, including liabilities under the Securities Act.

This offering will terminate upon the earlier of (1) the issuance and sale of all shares of our common stock covered by this prospectus supplement and (2) the termination of the sales agreement as permitted therein.

Ladenburg and each of its affiliates may in the future provide various investment banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, Ladenburg will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus supplement. This summary of the material provisions of the sales agreement does not purport to be a complete statement of its terms and conditions. We will file a copy of the sales agreement with the Commission on a Current Report on Form 8-K.

EXPERTS

The 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, 2015 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 financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

LEGAL MATTERS

Morgan, Lewis & Bockius LLP has passed upon the validity of the securities offered by this prospectus supplement. Ropes & Gray LLP, New York, New York, is counsel for Ladenburg in connection with this offering.

INFORMATION INCORPORATED BY REFERENCE

This prospectus supplement is part of a registration statement on Form S-3. The Commission allows this filing to "incorporate by reference" information that we previously have filed with the Commission. This means we can disclose important information to you by referring you to other documents that we have filed with the Commission. The information that is incorporated by reference is considered part of this prospectus supplement, and information that we file later will automatically update and may supersede this information. For further information about our company and the securities being offered, you should refer to the registration statement and the following documents that are incorporated by reference:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Commission on March 14, 2016, as amended on April 29, 2016;

Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016, filed with the Commission on May 10, 2016 and June 30, 2016, filed with the Commission on August 9, 2016;

Our Current Reports on Form 8-K filed with the Commission on January 4, 2016, January 6, 2016, May 16, 2016, July 1, 2016, and August 9, 2016, respectively;

Our Definitive Proxy Statement on Schedule 14A filed with the Commission on May 24, 2016;

All other reports filed by us pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the annual report referred to above; and

All documents filed by us subsequent to those listed above with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act following the date of filing of the registration statement of which this prospectus supplement is a part and prior to the termination of the offering, shall be deemed to be incorporated by reference into this prospectus supplement and to be a part hereof from the date of filing of such documents. The information relating to our company contained in this prospectus supplement does not purport to be comprehensive and should be read

together with the information contained in the incorporated documents. Any statement contained in a 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 herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

You may request a copy of all documents that are incorporated by reference in this prospectus supplement by writing or telephoning us at the following address and number: Repros Therapeutics Inc., 2408 Timberloch Place, Suite B-7, The Woodlands, Texas, 77380, (281) 719-3400. We will provide copies of all documents requested (not including exhibits to those documents, unless the exhibits are specifically incorporated by reference into those documents or this prospectus supplement) without charge.

You should rely only on the information provided in and incorporated by reference into this prospectus supplement or the accompanying prospectus. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus supplement or the accompanying prospectus is accurate as of any date other than the date on the front cover of these documents.

PROSPECTUS

\$100,000,000

Common Stock

Preferred Stock

Warrants

Rights

Units

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

- shares of common stock;
- shares of preferred stock;
- warrants to purchase, common stock or preferred stock;
- rights to purchase common stock or preferred stock; and
- units consisting of two or more of these classes of securities.

The securities:

- will have a maximum aggregate offering price of \$100,000,000;
- will be offered at prices and on terms to be set forth in an accompanying prospectus supplement;

- may be offered separately or together, or in separate series;
- may be convertible into or exchangeable for other securities; and
- may be listed on a national securities exchange, if specified in an accompanying prospectus supplement.

We may offer and sell these securities to or through underwriters, dealers or agents, directly to purchasers or through a combination of these methods. If we use underwriters, dealers or agents to sell these securities, we will name them and describe their compensation arrangements in the prospectus supplement relating to such offering. We will provide the specific terms of the securities in supplements to this prospectus. This prospectus may be used to offer and sell securities only if it is accompanied by a prospectus supplement.

Our Common Stock is traded on the Nasdaq Capital Market under the symbol “RPRX”. On June 13, 2016, the last reported sale price of our common stock on the Nasdaq Capital Market was \$1.70 per share.

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

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

The date of this prospectus is June 23, 2016.

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We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and the accompanying supplement to this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or the accompanying prospectus supplement. This prospectus and the accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy securities, nor do this prospectus and the accompanying supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus and the accompanying prospectus supplement is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus and any accompanying prospectus supplement is delivered or securities

sold on a later date.

ABOUT THIS PROSPECTUS

This document is called a prospectus and is part of a registration statement on Form S-3 that we filed with the SEC using a “shelf” registration process. Under this shelf process, we may offer and sell, from time to time in one or more offerings, the securities described in this prospectus. This prospectus provides you with a general description of the securities we may offer and the general manner in which these securities may be offered. Each time we sell securities under this prospectus, we will provide you with a prospectus supplement that will contain specific information about the terms of that offering and the offered securities. That prospectus supplement may also supplement, update or amend information contained in or incorporated by reference into this prospectus. Under this shelf process, we may sell different types of the securities described in this prospectus in one or more offerings up to a total offering amount of \$100,000,000.

The registration statement of which this prospectus is a part contains additional information about us and the securities we may offer by this prospectus. Specifically, we have filed and incorporated by reference certain legal documents that control the terms of the securities offered by this prospectus as exhibits to the registration statement. We will file or incorporate by reference certain other legal documents that will control the terms of the securities we may offer by this prospectus as exhibits to the registration statement or to reports we file with the SEC that are incorporated by reference into this prospectus. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading “Where You Can Find More Information.”

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

FORWARD-LOOKING INFORMATION

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

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

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

§ the success of clinical trials for Proellex®;

§ having available funding for the continued development of Proellex® and our enclomiphene product candidate;

§ volatility in the financial markets generally;

§ uncertainty related to our ability to obtain approval of our products by the by the Food and Drug Administration, or
§ FDA, and regulatory bodies in other jurisdictions;

§ dependence on a limited number of key employees;

§ uncertainty regarding changes to existing regulations or new regulations;

§ dependence on third parties for clinical development and manufacturing;

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

§ competition and risk of competitive new products;

§ uncertainty relating to our patent portfolio;

§ volatility in the value of our common stock;

§ continued listing on the Nasdaq Capital Market; 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,” “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.

SUMMARY

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

General

Repos Therapeutics Inc. (the “Company,” “Repos,” or “we,” “us” or “our”) was organized on August 20, 1987. We are a biopharmaceutical company focused on the development of new drugs to treat hormonal and reproductive system disorders.

Our enclomiphene product candidate, is a single isomer of clomiphene citrate and is an orally active proprietary small molecule compound. We are developing enclomiphene for the treatment of secondary hypogonadism in overweight men wishing to restore normal testicular function. Men with secondary hypogonadism exhibit low testosterone levels due to under stimulated testes but they are generally fertile. Enclomiphene is designed to treat the underlying mechanism, insufficient stimulation of the testes by the pituitary, which causes secondary hypogonadism. Secondary hypogonadism due to being overweight or obese is the single greatest cause of hypogonadism in general. On February 2, 2015, we announced that we electronically submitted our New Drug Application (“NDA”) to the Food and Drug Administration (“FDA”) for enclomiphene. The FDA accepted the NDA for review on April 1, 2015 and later assigned a Prescription Drug User Fee Act (PDUFA) goal date of November 30, 2015. In addition, the Division of Bone, Reproductive and Urologic Products (the Division) of the FDA scheduled an advisory committee meeting to review the NDA for November 3, 2015. However, the Division subsequently cancelled the scheduled advisory committee meeting due to questions that arose late in the review regarding the bioanalytical method validation that could affect interpretability of certain pivotal study data. On December 1, 2015, we announced that we had received a Complete Response Letter (CRL) from the FDA. A CRL informs companies that an NDA cannot be approved in its present form. In the CRL, the FDA stated that, based on recent scientific developments, the design of the enclomiphene Phase 3 studies is no longer adequate to demonstrate clinical benefit and recommended that Repos conduct an additional Phase 3 study or studies to support approval in the target population. The FDA also noted concerns regarding study entry criteria, titration and bioanalytical method validation in the Phase 3 program. Subsequently, on February 4, 2016, the Company attended a meeting with the FDA reviewers and senior leaders to discuss resolution of issues identified during the NDA review. The meeting covered a broad range of topics surrounding the NDA data as well as emerging agency and expert thinking regarding the treatment of hypogonadism. The Company believes based on the meeting that the FDA is not closed to considering secondary hypogonadism as an indication. Additionally, in January 2016, the Company initiated a Phase 2 double-blind, placebo controlled, proof of concept study, ZA-205, in obese secondary hypogonadal men to assess the impact of enclomiphene on metabolic parameters and quality of life under a diet and exercise regimen. This study was fully enrolled in February 2016 and six month data is expected in the third

quarter of 2016.

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. On December 29, 2014, we announced that we have initiated two Phase 2B studies for low dose Proellex® in the treatment of uterine fibroids and are currently conducting a Phase 2 study in the treatment of endometriosis. All three of these Proellex® studies were fully enrolled in January 2016. On April 12, 2016, we announced positive clinical data for the vaginal application of Proellex® in women with severe menstrual bleeding due to uterine fibroids. Additionally, on May 18, 2016, we announced that oral administration of Proellex®, at doses of both 6 and 12 mg, achieved significant reduction in excessive menstrual bleeding, the key symptom of uterine fibroids.

As of March 31, 2016, we had accumulated losses of \$307.1 million, approximately \$16.0 million in cash and cash equivalents, and accounts payable and accrued expenses of approximately \$2.1 million, in the aggregate.

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

RISK FACTORS

An investment in the securities offered by this prospectus involves a high degree of risk. Before deciding to invest, you should carefully consider the risks described below and discussed under the section captioned “Risk Factors” contained in our Annual Report on Form 10-K for the year ended December 31, 2015, as amended, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, which are incorporated by reference in this prospectus, together with the other information in this prospectus, the information and documents incorporated by reference herein, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, the financial condition, results of operations or cash flow could be harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. The risks described below and in the documents referenced above are not the only ones we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business.

Risks Related to our Common Stock

Purchasers in this offering will experience immediate and substantial dilution.

As of March 31, 2016, we had a net tangible book value of \$14.2 million which yields a net tangible book value of approximately \$0.59 per share of common stock, assuming no exercise of any 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 4 of this prospectus. The exercise of outstanding options 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.

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

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

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

limit who can call a special meeting of stockholders; and

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

USE OF PROCEEDS

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

· funding clinical trials and regulatory submissions for our enclomiphene product candidate and for Proellex®;
and

· general working capital.

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

DIVIDEND POLICY

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

Dilution

We will set forth in a prospectus supplement, when applicable, the following information regarding any material dilution of the equity interests of investors purchasing securities in an offering under this prospectus:

· the net tangible book value per share of our equity securities before and after the offering;

the amount of the increase in such net tangible book value per share attributable to the cash payments made by purchasers in the offering; and

· the amount of the immediate dilution from the public offering price which will be absorbed by such purchasers.

DESCRIPTION OF CAPITAL STOCK

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

As of March 31, 2016, we had 24,318,111 outstanding shares of common stock and no outstanding shares of preferred stock.

As of March 31, 2016, we had outstanding stock options to purchase 2,554,857 shares of common stock at prices ranging from \$0.82 to \$50.80.

Common Stock

Subject to any special voting rights of any series of preferred stock that we may issue in the future, each share of common stock has one vote on all matters voted on by our stockholders, including the election of our directors. Because holders of common stock do not have cumulative voting rights, the holders of a majority of the shares of common stock can elect all of the members of the board of directors standing for election, subject to the rights, powers and preferences of any outstanding series of preferred stock.

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

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

Our board of directors may authorize the issuance of preferred stock with voting, conversion, dividend, liquidation and other rights that may adversely affect the rights of the holder of our common stock.

Preferred Stock

Our certificate of incorporation provides that shares of preferred stock may be issued from time to time in one or more series. Our board of directors has authority to issue up to 5,000,000 shares of preferred stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by our stockholders. The rights of holders of our common stock may be subject to, and adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control and may adversely affect the voting and other rights of holders of our common stock.

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.

Transfer Agent

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

Anti-Takeover Effects of Our Certificate of Incorporation, Bylaws and Delaware Law

General

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

Delaware Business Combination Statute

Section 203 of the Delaware General Corporation Law provides that, subject to specified exceptions, an “interested stockholder” of a Delaware corporation may not engage in any “business combination,” including general mergers or consolidations or acquisitions of additional shares of the corporation, with the corporation for a three-year period following the time that such stockholder becomes an interested stockholder unless:

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

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

on or after such time, the business combination is approved by the board of directors of the corporation and authorized not by written consent, but at an annual or special meeting of stockholders, by the affirmative vote of at least 66 2/3% of the outstanding voting stock not owned by the interested stockholder.

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

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

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

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

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

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

the affiliates and associates of any such person.

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

Advance Notice Requirements for Director Nominations and Other Stockholder Proposals

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

The stockholder notice must set forth the following:

As to each person the stockholder proposes to nominate for election as a director, all information relating to such person that would be required to be disclosed in solicitations of proxies for the election of such nominees as directors pursuant to rules promulgated under the Exchange Act;

2. The written consent to serve as a director if elected by each person nominated;
3. Name and address of the stockholder as they appear on our books; and
4. The class and number of shares of our common stock beneficially owned by such stockholder.

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

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

Authorized But Unissued Shares

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

DESCRIPTION OF RIGHTS

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

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

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

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

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

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

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

- the extent to which the rights are transferable;

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

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

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

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

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

DESCRIPTION OF UNITS

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

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

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

- a description of the terms of any unit agreement governing the units;
- a description of the provisions for the payment, settlement, transfer or exchange of the units;
- any material United States federal income tax consequences; and

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

PLAN OF DISTRIBUTION

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

§ the name or names of any agents or underwriters;

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

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

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

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

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

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

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

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

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

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

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

Any underwriters who are qualified market makers on the Nasdaq Capital Market may engage in passive market making transactions in the securities on the Nasdaq Capital Market in accordance with Rule 103 of Regulation M under the Securities Exchange Act of 1934, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities being offered by this prospectus will be passed upon for us by Morgan, Lewis & Bockius LLP, and for any underwriters or agents by counsel named in the applicable prospectus supplement.

EXPERTS

The 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, 2015, as amended, 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 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 required to file annual, quarterly and current reports, and other information with the SEC. You may read and copy any document which we have filed at the SEC's public reference room at:

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

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

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

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

Repros Therapeutics Inc.

2408 Timberloch Place, Suite B-7

The Woodlands, Texas 77380

(281) 719-3400

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

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

INCORPORATION OF INFORMATION BY REFERENCE

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

§ Repros' Annual Report on Form 10-K for the year ended December 31, 2015 filed with the SEC on March 14, 2016,
§ as amended by Amendment No. 1 thereto filed with the SEC on April 29, 2016;

§ Repros' Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 filed with the SEC on May 10, 2016;

§ Repros' Current Reports on Form 8-K filed with the SEC on January 4, 2016, January 6, 2016 and May 16, 2016;

§ Repros' Definitive Proxy Statement for its 2016 annual meeting of stockholders, filed with the SEC on May 24, 2016;
§ and

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

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

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