Recro Pharma, Inc.
Form 424B3
April 10, 2015

Filed Pursuant to Rule 424(b)(3)
Registration Statement No. 333-201841

Prospectus Supplement No. 3

to Prospectus dated February 26, 2015

2,500,000 Shares

Common Stock

This Prospectus Supplement No. 3 supplements and amends our prospectus dated February 26, 2015 (the Prospectus), relating to the sale, from time to time, of up to 2,500,000 shares of our common stock by Aspire Capital Fund, LLC.

This prospectus supplement is being filed to include the information set forth in our Current Report on Form 8-K filed with the Securities and Exchange Commission (the SEC) on April 10, 2015. This prospectus supplement should be read in conjunction with the Prospectus and any amendments or supplements thereto, which are to be delivered with this prospectus supplement, and is qualified by reference to the Prospectus, except to the extent that the information in this prospectus supplement updates or supersedes the information contained in the Prospectus, including any amendments or supplements thereto.

Our common stock trades on the NASDAQ Capital Market under the ticker symbol REPH. On April 9, 2015, the last reported sale price per share of our common stock was $9.73 per share.

Investing in our common stock involves risk. Please read carefully the section entitled Risk Factors beginning on page 8 of the Prospectus.

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

The date of this Prospectus Supplement No. 3 is April 10, 2015.

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the

Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): April 9, 2015

Recro Pharma, Inc.

(Exact name of registrant as specified in its charter)

Pennsylvania	**001-36329**	**26-1523233**
(State or other jurisdiction of incorporation or organization)	**(Commission File Number)**	**(I.R.S. Employer Identification No.)**

490 Lapp Road, Malvern, Pennsylvania	**19355**
(Address of principal executive offices)	**(Zip Code)**

Registrant s telephone number, including area code: (484) 395-2470

Not Applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

¨ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

¨ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

¨ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

¨ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 8.01 Other Events.

On April 9, 2015, Recro Pharma, Inc. (the Company) issued a press release announcing completion of the prespecified interim analysis of the Company s Phase II, double-blind trial of Dex-IN in patients who initiate dosing of study medication on Post Op Day 1 following bunionectomy surgery. A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibit is filed herewith:

99.1 Press release, dated April 9, 2015

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Recro Pharma, Inc.

By: /s/ Gerri A. Henwood
Name: Gerri A. Henwood
Title: Chief Executive Officer

Date: April 10, 2015

EXHIBIT INDEX

Exhibit No.	Document
99.1	Press release, dated April 9, 2015

Exhibit 99.1

Recro Pharma Announces Update on On-Going Phase II Clinical

Trial of Dex-IN for Treatment of Acute Pain on Day 1 Following

Surgery

Encouraging Results Support Continuation and Completion of Trial

MALVERN, PA, April 9, 2015 Recro Pharma, Inc. (Nasdaq: REPH), a clinical stage specialty pharmaceutical company developing non-opioid therapeutics for the treatment of acute post-operative pain today announced that it had completed the prespecified interim analysis conducted on the Company s Phase II, double-blind REC-14-013 trial of Dex-IN in patients who initiate dosing of study medication on Post Op Day 1 following bunionectomy surgery. The purpose of the interim analysis was to allow for a sample size adjustment, if necessary, to maintain the ability to detect a difference in treatment effects between Dex-IN and placebo. The trial was expected to enroll approximately 200-250 patients. As a result of the interim analysis, the total enrollment for the trial was adjusted to approximately 170 patients.

The completion of the interim analysis is an important milestone for Recro Pharma and we are encouraged by this outcome, said Gerri Henwood, Recro Pharma s President and Chief Executive Officer. We eagerly anticipate the completion of this trial and remain on track to report top-line results by mid-year 2015. There remains a significant unmet need for non-opioid analgesics for acute post operative pain, a need we continue to believe may be addressed by Dex-IN.

The Phase II trial is a randomized, multicenter, double-blind, placebo-controlled study to evaluate the efficacy and safety of Recro Pharma s proprietary intranasal formulation of dexmedetomidine, Dex-IN, in adult patients undergoing bunionectomy surgery, initiating dosing of study medication on Post Op Day 1. Patients who meet the eligibility criteria are randomized to either a 50µg dose of Dex-IN or a placebo intranasal dose given every 6 hours. Following the beginning of treatment, patients remain under observation for 48 hours at study centers. Patients are followed for 7 days after the initial dose of study medication. There is an oral opioid rescue treatment available to patients in either treatment group, if required, to provide adequate pain relief.

The primary efficacy endpoint of the trial is the summed pain intensity difference over 48 hours, SPID48, starting on Post Op Day 1. Additional efficacy endpoints include use of opioid rescue medication, other pain parameters and opioid related side effects, as well as Patient Global Assessment (PGA) of pain control.

Bunionectomy surgery generally involves an incision in the top or side of the big toe joint and the removal or realignment of soft tissue and bone. This is done to relieve pain and restore normal alignment to the joint. Bunionectomy surgery typically results in intense post-operative pain. In the past, drugs that have demonstrated analgesic effectiveness following bunionectomy surgery have frequently translated that analgesic success into other post-operative procedures that result in moderate to severe, acute pain.

About Recro Pharma, Inc.

Recro Pharma is a clinical stage specialty pharmaceutical company developing non-opioid therapeutics for the treatment of acute post operative pain. Recro Pharma s lead product candidate, Dex-IN, is a proprietary intranasal formulation of dexmedetomidine and has completed multiple clinical trials in which Dex-IN was well tolerated. As Recro Pharma s product candidates are not in the opioid class of drugs, the Company believes its candidates would avoid many of the side effects associated with commonly prescribed opioid therapeutics, such as addiction,

constipation and respiratory distress while maintaining analgesic effect. If approved, Dex-IN would be the first and only approved acute pain drug in its class.

Cautionary Statement Regarding Forward Looking Statements

This press release contains forward-looking statements that involve risks and uncertainties. Such forward-looking statements reflect Recro Pharma s expectations about its future operating results, performance and opportunities that involve substantial risks and uncertainties. When used herein, the words anticipate, believe, estimate, upcoming, p target , intend and expect and similar expressions, as they relate to Recro Pharma or its management, are intended to identify such forward-looking statements. These forward-looking statements are based on information available to Recro Pharma as of the date of this press release and are subject to a number of risks, uncertainties, and other factors that could cause Recro Pharma s actual results, performance, prospects, and opportunities to differ materially from those expressed in, or implied by, these forward-looking statements. Recro Pharma assumes no obligation to update any such forward-looking statements. Factors that could cause Recro Pharma s actual results to materially differ from those expressed in the forward-looking statements set forth in this press release include, without limitation: the results and timing of the clinical trials of Dex-IN and any future clinical and preclinical studies; the ability to obtain and maintain regulatory approval of product candidates, and the labeling under any such approval; regulatory developments in the United States and foreign countries; the Company s ability to raise future financing for continued development; the performance of third-party suppliers and manufacturers; the Company s ability to obtain, maintain and successfully enforce adequate patent and other intellectual property protection; the successful commercialization of the Company s product candidates; the successful implementation of the Company s strategy; the Company s ability to close and integrate the pending acquisition of assets from Alkermes; and the Company s ability to meet required debt payments and operate under increased leverage and associated lending covenants in connection with the pending acquisition. In addition, the forward-looking statements in this press release should be considered together with the risks and uncertainties that may affect Recro Pharma s business and future results included in Recro Pharma s filings with the Securities and Exchange Commission at www.sec.gov. Recro Pharma assumes no obligation to update any such forward looking statements.

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