UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

December 12, 2013

Via E-mail
Gerri A. Henwood
President and Chief Executive Officer
Recro Pharma, Inc.
490 Lapp Road
Malvern, PA 19355

Re: Recro Pharma, Inc.
Amendment No. 1 to a Registration Statement on Form S-1
Filed November 29, 2013
File No. 333-191879

Dear Ms. Henwood:

We have reviewed your amended registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

General

1. We note your response to our prior comment two and the three graphs set forth in Appendix A that you propose to include after the prospectus cover page. These graphs constitute technical information that is not appropriate for the forepart of the prospectus because it is not placed in an appropriate context. Accordingly, please confirm that you will remove these graphs from the inside front cover of the prospectus.

Business
Pipeline, page 56

2. We note your response to our prior comment thirteen and reissue the comment in part. Please disclose the identity of the filer of the investigational new drug (IND) applications for Dex. Additionally, we note your disclosure that an IND amendment was filed to change the indication for Dex-IN from cancer-breakthrough pain to post-operative pain. We also note your disclosure that an IND was filed for Dex-SL for the indication of cancer-breakthrough pain. However, we note your pipeline chart on page 57 indicates that Dex-IN is currently in Phase 2 for treatment of cancer breakthrough pain and Dex-SL is in Phase 2 for treatment of chronic pain. Please disclose whether these trials will require you to file separate INDs for both Dex-IN and Dex-SL for the respective indications. If not, please explain how you will conduct Phase 2 trials for Dex-IN and Dex-SL in these indications with active INDs covering only post-operative pain and cancer-breakthrough pain, respectively.

Clinical Trial Overview, page 59

3. We note your inclusion of graphs relating to your clinical trial results on pages 61, 62, and 63. Please revise or replace the graphs on these pages with higher resolution and enlarged graphics and corresponding text to improve legibility. Please additionally revise your reference in these graphs to "Dex-IN PBO" to clearly indicate, if true, that you are referring to a placebo.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;

- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and

- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Dana Hartz at (202) 551-3648 or Mary Mast at (202) 551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact Austin Stephenson at (202) 551-3192 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Jeffrey P. Riedler

Jeffrey P. Riedler
Assistant Director

cc: Via E-mail
Justin P. Klein, Esq.
Ballard Spahr LLP