



DIVISION OF
CORPORATION FINANCE

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

February 10, 2015

Via E-Mail

Gordon K. Johnson
Chief Financial Officer
KemPharm, Inc.
2656 Crosspark Road, Suite 100
Coralville, IA 52241

**Re: KemPharm, Inc.
Amendment No. 1 to
Draft Registration Statement on Form S-1
Submitted January 26, 2015
CIK No. 0001434647**

Dear Mr. Johnson:

We have reviewed your amended draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

General

1. We note your disclosure on pages 29, 57 and 73 where you describe the royalty rate that MonoSol RX LLC may receive under various circumstances as low-double-digit. You should instead describe the royalty rate as a range less than 10%, such as teens, twenties, low teens, low twenties, etc., as applicable. Please revise your disclosure accordingly.

We face substantial competition..., page 37

2. Please revise your disclosure on pages 38, 108 and 109 to identify the leading competing brand name and generic products that will compete with KP303, KP415, KP511 and KP606, in addition to naming the competing companies as previously requested.

Anti-takeover provisions in our certificate of incorporation..., page 57

3. On page 57, your disclosure states “[i]n addition, the provisions of our termination agreement with a third party and our agreements with Deerfield may discourage, delay or prevent a change in control of our company.” Revise to identify the referenced third party as MonoSol RX.

Market and Industry Data, page 63

4. We reissue our prior comment 7. Please revise your disclosure to remove the language added to this section in the current amendment and to remove the language that we previously requested be deleted or alternately state that you are responsible for all of the disclosure you provide in the prospectus.

Business, page 90

5. We note that your disclosure regarding the asset purchase agreement with Shire is spread throughout the prospectus. Please revise the business section to provide a comprehensive description of the material terms of that agreement under one heading. In your response, you should also explain to us the basis for your apparent conclusion that this is not an affiliated agreement that would require identification as such under “Related Party Transactions” as Travis C. Mickle Ph.D. is a party to this agreement.

Principal Stockholders, page 149

6. Your revised disclosure in response to prior comment 13 does not include the requested statement that James E. Flynn is the sole beneficial owner of the shares held of record by Deerfield Private Design Fund III. Accordingly, please revise your disclosure in Footnote 1 to so state.

Warrants on Common Stock, page F-20

7. Your response to prior comment 16 indicates terms of the Underwriter Warrants not currently disclosed herein. Please revise this note to describe these and any other significant terms.

Gordon K. Johnson
KemPharm, Inc.
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You may contact Keira Nakada at (202) 551-3659 or Jim Rosenberg at (202) 551- 3679 if you have questions regarding comments on the financial statements and related matters. Please contact Preston Brewer at (202) 551-3969 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Jeffrey P. Riedler

Jeffrey P. Riedler
Assistant Director

cc: Via E-Mail
Brent Siler, Esq.
Cooley LLP