

Matthew P. Dubofsky +1 720 566 4244 mdubofsky@cooley.com VIA EDGAR AND FEDEX

March 24, 2015

United States Securities and Exchange Commission 100 F Street, N.E. Mail Stop 4720 Washington, D.C. 20549

Attn: Mr. Jeffrey Riedler

Ms. Keira Nakada Mr. Jim Rosenberg Mr. Preston Brewer

RE: KemPharm, Inc.

Registration Statement on Form S-1 Registration No. 333-202660

FOIA Confidential Treatment Request

The entity requesting confidential treatment is KemPharm, Inc. 2656 Crosspark Road, Suite 100 Coralville, IA 52241 Attn: Gordon K. Johnson Telephone: (319) 665-2575

Ladies and Gentlemen:

On behalf of our client KemPharm, Inc. (the "Company"), please find below supplemental information in response to comments from the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") contained in its letter dated January 15, 2015.

Because of the commercially sensitive nature of information contained herein, this submission is accompanied by a request for confidential treatment for selected portions of this letter. The Company has filed a separate letter with the Office of Freedom of Information and Privacy Act Operations in connection with the confidential treatment request, pursuant to Rule 83 of the Commission's Rules on Information and Requests, 17 C.F.R. § 200.83. For the Staff's reference, we have enclosed a copy of the Company's letter to the Office of Freedom of Information and Privacy Act Operations as well as a copy of this correspondence, marked to show the portions redacted from the version filed via EDGAR and for which the Company is requesting confidential treatment.

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETED ASTERISKS, HAS BEEN OMITTED AND FILED SEPARATELY WITH THE COMMISSION PURSUANT TO 17 CFR §200.83

380 INTERLOCKEN CRESCENT, SUITE 900, BROOMFIELD, CO 80021-8023 T: (720) 566-4000 F: (720) 566-4099 WWW.COOLEY.COM

March 24, 2015 Page Two

To assist the Staff in its review of the Company's Registration Statement on Form S-1 (File No. 333-202660) (the "*Registration Statement*"), the Company supplementally advises the Staff that on March 13, 2015, Cowen and Company, LLC and RBC Capital Markets, LLC, the lead underwriters for the Company's proposed initial public offering ("*IPO*") and on behalf of the underwriters, advised the Company that, based on current market conditions, they would recommend a preliminary estimated price range of between \$[*] and \$[*] per share of the Company's common stock for the IPO (the "*Preliminary IPO Price Range*"). The Company expects to effect a reverse stock split prior to the IPO, but the Preliminary IPO Price Range shown above and all other pershare numbers in this letter are presented on a pre-split basis.

The reverse stock split ratio has not yet been determined and the price range of the common stock may change. Accordingly, the Company hereby advises the Staff that the Company intends to file a pre-effective amendment to its Registration Statement with a preliminary prospectus that will include a bona fide post-split estimated public offering price range prior to the distribution of any preliminary prospectus. This price range will be no more than \$2.00, if the maximum price is \$10.00 per share or less, or 20%, if the maximum price is greater than \$10.00 per share.

As described beginning on page 84 of the Registration Statement, the most recent contemporaneous valuation of the Company's common stock was as of December 31, 2014 and based on that valuation the Company granted options to acquire its common stock on January 20, 2015 and March 2, 2015 with an exercise price equal to \$1.15 per share. In approving the January 2015 and March 2015 option grants, the Company's board of directors determined that on each grant date no significant business or market developments had occurred since the valuation date of December 31, 2014 that would warrant a change in the valuation of the Company's common stock.

The Company respectfully submits to the Staff that the increase in value between the December 31, 2014 valuation report and the Preliminary IPO Price Range is reasonable. Specifically, the probability weighted expected return method used in the Company's December 31, 2014 valuation yielded a valuation of \$1.15 per share, after allocation of the Company's equity value to the classes of the Company's capital stock based on the rights and preferences for each class of stock, and application of a discount factor to reflect a discount rate of the common stock and the time value of money for the period from December 31, 2014 until the assumed date of a liquidity event, as multiplied by the estimated probability of multiple liquidation scenarios. The per share value of \$1.15 in the Company's December 31, 2014 valuation was based on an 80% probability of an IPO by March 31, 2015 and a 5% probability of an IPO by June 30, 2015. In contrast, the Preliminary IPO Price Range is for a single outcome that necessary assumes that the IPO has occurred and a public market for the Company's common stock has been created. As a result, unlike the valuations performed in connection with the company's option grants as a private company, the Preliminary IPO Price Range excludes any discount for the Company's

CERTAINCONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETED ASTERISKS, HAS BEEN OMITTED AND FILED SEPARATELY WITH THE COMMISSION PURSUANT TO 17 CFR §200.83

380 INTERLOCKEN CRESCENT, SUITE 900, BROOMFIELD, CO 80021-8023 T: (720) 566-4000 F: (720) 566-4099 WWW.COOLEY.COM

March 24, 2015 Page Three

common stock and takes into account that the IPO would provide significant cash proceeds to the Company to help fuel its growth and substantially strengthen its balance sheet. As an illustration of these factors, the Company submits to the Staff that had the Company assumed a 100% probability of an IPO by March 31, 2015 or June 30, 2015, respectively, the December 31, 2014 valuation report would have produced a per share value, on an pre-discount basis, equal to $\{*\}$ or $\{*\}$, respectively.

Further, there are other factors that support the discount in the December 31, 2014 valuation determination, as compared to the Preliminary IPO Price Range. Importantly, in March 2015, subsequent to the public filing of the Registration Statement and subsequent to the March 2, 2015 option grants, the Company and its IPO underwriters received an indication of interest from one of its existing investors (which is a leading, life science institutional investor and a significant security holder in the Company) to purchase a meaningful number of shares contemplated to be offered in the IPO. The Company and its IPO underwriters believe that the reputation of this investor and its indication of interest may encourage other investors to purchase shares in the IPO. Without the support of this investor, the Company believes the IPO may have been delayed or the price range would be lower.

In addition, the discount in the December 31, 2014 valuation, as compared to the Preliminary IPO Price Range, is supported by (i) the inherent uncertainty of completing a successful initial public offering, (ii) the possibility that the actual initial public offering price could be substantially lower than the Preliminary IPO Price Range recommended by the Company's underwriters and (iii) the 180-day lock-up agreement to which the shares underlying the stock options will be subject following the initial public offering.

In summary, the Company respectfully submits that the deemed per-share fair values used as the basis for determining stock-based compensation in connection with its stock option grants, including those since December 31, 2014, are reasonable and appropriate for the reasons described herein and in the Registration Statement. As a result, the Company does not propose to increase the amount of its previously recorded stock-based compensation expense as a result of the underwriters' preliminary estimate.

We hereby further request, pursuant to Rule 418(b) under the Securities Act of 1933, as amended, the return of the unredacted version of this letter. The Company believes that return of the supplemental information contained in this letter will protect the interests of investors and is consistent with the provisions of the Freedom of Information Act by maintaining in confidence the potential valuation of the Company that may, if disseminated, negatively impact the trading in the stock of the Company following the IPO. The Company advises the Staff that it has not filed the supplemental information subject to this request in electronic format. Please return this letter to the Company, in care of the undersigned, a responsible representative of the Company, at 380 Interlocken Crescent, Suite 900, Broomfield, CO 80021-8023.

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETED ASTERISKS, HAS BEEN OMITTED AND FILED SEPARATELY WITH THE COMMISSION PURSUANT TO 17 CFR §200.83

380 INTERLOCKEN CRESCENT, SUITE 900. BROOMFIELD, CO 80021-8023 T: (720) 566-4000 F: (720) 566-4099 WWW.COOLEY.COM

March 24, 2015 Page Four

* * * *

If you have any questions or comments with regard to this matter, please do not hesitate to contact the undersigned at (720) 566-4244 or Mark Ballantyne, of Cooley LLP's Reston office, at (703) 456-8084.

Very truly yours,

/s/ Matthew P. Dubofsky Matthew P. Dubofsky

cc: Gordon K. Johnson, KemPharm, Inc.
David W. Pollak, Morgan, Lewis & Bockius LLP
James C. T. Linfield, Cooley LLP
Brent B. Siler, Cooley LLP

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETED ASTERISKS, HAS BEEN OMITTED AND FILED SEPARATELY WITH THE COMMISSION PURSUANT TO 17 CFR $\S 200.83$

380 INTERLOCKEN CRESCENT, SUITE 900, BROOMFIELD, CO 80021-8023 T: (720) 566-4000 F: (720) 566-4099 WWW.COOLEY.COM