

CONFIDENTIAL TREATMENT REQUEST UNDER RULE 83**The entity requesting confidential treatment is:****Concert Pharmaceuticals, Inc.****99 Hayden Avenue, Suite 500****Lexington, MA 02421****Attn: Nancy Stuart, Chief Operating Officer****(781) 860-0045**

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January 23, 2014

By EDGAR Transmission

Securities and Exchange Commission

Division of Corporation Finance

100 F Street, N.E.

Washington, DC 20549

Attention: Jeffrey P. Riedler

Re: Concert Pharmaceuticals, Inc. | Anticipated Price Range
Registration Statement on Form S-1 (File No. 333-193335)

Ladies and Gentlemen:

Rule 83 Confidential Treatment Request by Concert Pharmaceuticals, Inc. Request #1

This letter is furnished supplementally on behalf of Concert Pharmaceuticals, Inc. (the "Company") in connection with the review by the Securities and Exchange Commission (the "Commission") of the above-mentioned Registration Statement on Form S-1 (the "Registration Statement"). To assist the staff (the "Staff") of the Commission in its review, the Company advises the Staff that it presently estimates, based in part on input recently received from its underwriters, that the public offering price per share for the offering pursuant to the Registration Statement will be between \$[**] and \$[**] (without giving effect to any stock split that the Company may effect prior to the offering), considering information currently available and current market conditions. For clarity, the Company advises the Staff that, given the volatility of the public trading markets and the uncertainty of the timing of the offering, the Company and the underwriters have not yet finally agreed to a price range for the offering.

Concert Pharmaceuticals, Inc. respectfully requests that the information contained in Request #1 be treated as confidential information and that the Commission provide timely notice to Nancy Stuart, Chief Operating Officer, Concert Pharmaceuticals, Inc., 99 Hayden Avenue, Suite 500, Lexington, MA 02421, telephone (781) 860-0045, before it permits any disclosure of the bracketed contained in Request #1.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Frankfurt London Los Angeles New York Oxford Palo Alto Waltham Washington

January 23, 2014

Page 2

Once the estimated price range for the offering has been determined, the Company will disclose the estimated price range in a subsequent amendment to the Registration Statement. The Company advises the Staff that the estimated price range that it will disclose in the Registration Statement will represent a spread that is no more than the greater of \$2.00 or 20% of the top of that range. To the extent that the midpoint of the estimated price range disclosed in such amendment to the Registration Statement represents an increase over the per share fair values assessed for financial reporting purposes for the Company's equity incentive awards granted since the beginning of 2013, the Company will include in such amendment a quantitative and qualitative discussion of factors contributing to the differences between the per share fair values assessed for such equity incentive awards and the midpoint of the estimated price range. The Company expects that such disclosure would be generally consistent with the following currently contemplated disclosure:

“Initial public offering price

In consultation with the underwriters for this offering, we determined the estimated price range for this offering, as set forth on the cover page of this prospectus. The midpoint of the price range is \$[] per share. In comparison, our estimate of the fair value of our common stock was \$[] per share as of [], 2013. We note that, as is typical in initial public offerings, the estimated price range for this offering was not derived using a formal determination of fair value, but was determined by negotiation between us and the underwriters. Among the factors that were considered in setting this range were the following:

- an analysis of the typical valuation ranges seen in recent initial public offerings for companies in our industry;
- the general condition of the securities markets and the recent market prices of, and the demand for, publicly traded common stock of generally comparable companies;
- an assumption that there would be a receptive public trading market for pre-commercial biotechnology companies such as us; and
- an assumption that there would be sufficient demand for our common stock to support an offering of the size contemplated by this prospectus.

The midpoint of the estimated price range for this offering reflects an increase over the retrospective valuation as of [], 2013 of \$[] per share. Investors should be aware of this difference and recognize that the price range for this offering is in excess of our prior valuations. Further, investors are cautioned not to place undue reliance on the valuation methodologies discussed above as an indicator of future stock prices. We believe the difference may be due to the following factors:

- The initial offering price range necessarily assumes that this offering has occurred, a public market for our common stock has been created and that our preferred stock has converted into common stock in connection with this offering and, therefore, excludes the marketability or illiquidity discounts associated with the timing or likelihood of an initial public offering, the superior rights and preferences of our preferred stock and the alternative scenarios considered in our contemporaneous and retrospective valuations described in this prospectus.

January 23, 2014

Page 3

- In the public markets we believe there are investors who may apply more qualitative valuation criteria to certain of our clinical assets than the valuation methods applied in our valuations.
- The price that investors are willing to pay in this offering, for which the price range is intended to serve as an estimate, may take into account other things that have not been expressly considered in our prior valuations, are not objectively determinable and that valuation models are not able to quantify.

Investors should be cautioned that the midpoint of the price range set forth on the cover of this prospectus does not necessarily represent the fair value of our common stock, but rather reflects an estimate of the offer price determined in consultation with the underwriters.”

Please direct any questions or comments regarding this letter or the Registration Statement to the undersigned at (617) 526-6982 or to Jeffries Oliver-Li of this firm at (617) 526-6786. Thank you for your assistance.

Sincerely,

/s/ Lia Der Marderosian

Lia Der Marderosian