

Tonix Pharmaceuticals Holding Corp.
509 Madison Avenue, Suite 306
New York, New York 10022

August 11, 2014

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, DC 20549

Attn: Jeffrey P. Riedler, Assistant Director
Division of Corporation Finance

Dan Greenspan, Esq.
Matthew Jones, Esq.

Re: Tonix Pharmaceuticals Holding Corp.
Registration Statement on Form S-3
Filed August 1, 2014
File No. 333-197824

Ladies and Gentlemen:

The following response addresses the comment of the reviewing staff of the Commission as set forth in a comment letter dated August 8, 2014 (the "Comment Letter") relating to the Registration Statement on Form S-3 filed on August 1, 2014 (the "Registration Statement") by Tonix Pharmaceuticals Holding Corp. (the "Company").

1. Please provide an analysis of your eligibility to use Form S-3 for this offering in your correspondence. If you are relying upon General Instruction I.B.6. of Form S-3, please also revise the outside front cover of the prospectus to disclose the calculation of the aggregate market value of your outstanding voting and non-voting common equity pursuant to General Instruction I.B.6. and the amount of all securities offered pursuant to General Instruction I.B.6. during the prior 12 calendar month period that ends on, and includes, the date of the prospectus.

Response:

The Company is eligible to use a Form S-3 registration statement for the proposed offering. The Company meets all of the registration requirements pursuant to General Instruction I.A. of Form S-3. The Company is also primary eligible, as it also meets the transaction requirement pursuant to General Instruction I.B.1 of Form S-3, whereby the aggregate market value of the voting and non-voting common equity held by non-affiliates of the Company is \$75 million or more.

On June 30, 2014, the Company had 9,933,106 shares of common stock issued and outstanding and the closing price of the Company's common stock on that day was \$14.35. On June 30, 2014, officers and directors owned 806,599 shares of common stock. As a result, the Company believes that the total number of shares of common stock held by non-affiliates on June 30, 2014 was 9,126,507, and the market value of such shares was approximately \$131 million.

On June 30, 2014, the Company was aware of only one stockholder, Technology Partners Fund VIII, LP ("Technology Partners"), other than an officer and/or director, which was a beneficial holder in excess of 5% of the Company's stock. Technology Partners beneficially owned less than 10% of the Company's common stock, and the Company believes that it is not an affiliate as defined in Rule 405 under the Securities Act of 1933, as amended. However, for purposes of this discussion only, even if Technology Partners was deemed an affiliate, it held 547,972 shares as of June 30, 2014, and combined with the officers and directors, that was a total of 1,354,571 shares held by such "deemed affiliates." As a result, the total number of shares of common stock held by non-affiliates on June 30, 2014 would have been 8,578,535, and the market value of such shares was approximately \$123 million.

As a result, the Company is primary eligible in accordance with General Instruction I.B.1 of Form S-3, and no amendment need be made to the Registration Statement to provide any disclosures pursuant to General Instruction I.B.6. of Form S-3.

We trust that the foregoing appropriately addresses the issue raised by your recent Comment Letter. Thank you in advance for your prompt review and assistance.

Very truly yours,

/s/ SETH LEDERMAN
Seth Lederman
Chief Executive Officer

Cc: Marc J. Ross, Esq.
James M. Turner, Esq.
