

October 8, 2014

**Via EDGAR and Overnight Delivery**

Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street, N.E.  
Washington, D.C. 20549-3720

Attention: Jeffrey P. Riedler, Assistant Director  
Johnny Gharib, Attorney  
Joel Parker, Accounting Branch Chief  
Tabatha Akins, Staff Accountant

**Re: Xenon Pharmaceuticals Inc.  
Amendment No. 1 to Registration Statement on Form S-1  
Filed October 6, 2014  
File No. 333-198666**

Ladies and Gentlemen:

On behalf of Xenon Pharmaceuticals Inc. (the “**Company**”), we submit this letter in response to a comment from the staff (the “**Staff**”) of the Securities and Exchange Commission (the “**Commission**”) received by letter dated October 7, 2014, relating to Amendment No. 1 to the Company’s Registration Statement on Form S-1 (File No. 333-198666) filed with the Commission on October 6, 2014 (the “**Registration Statement**”).

In this letter, we have recited the comment from the Staff in italicized, bold type and have followed the comment with the Company’s response. Except as otherwise specifically indicated, page references herein correspond to the page of the Registration Statement, as applicable.

**Capitalization, page 55**

- On page F-17, you state “Each of the Series A, Series B and Series E preferred shares will automatically convert into common shares in connection with an IPO satisfying certain threshold requirements.” Please disclose these threshold requirements in the notes to the financial statements, and expand your pro forma disclosures throughout the filing to explain why assuming that the convertible preferred stock will be converted into common stock is factually supportable. Refer to rule 11-02(b)(6) of Regulation S-X.***

The Company advises the Staff that it has revised the disclosure on pages F-8 and F-17 in response to the Staff’s comment.

The Company further supplementally advises the Staff that the Company has received consents from the requisite number of holders of Series A, Series B and Series E preferred shares, as prescribed in the articles of the Company, to effect the conversion of all outstanding Series A, Series B and Series E preferred shares into common shares prior to the closing of the offering upon approval of the Company’s board of directors. Consequently, the Company advises the Staff that there are no longer any threshold requirements that must be satisfied in order for all of

the outstanding Series A, Series B and Series E preferred shares to be converted into common shares. As such, the Company advises the Staff that it has revised the Registration Statement as discussed above to remove reference to the threshold requirements prior to the automatic conversion of the Company's preferred shares to common shares.

\* \* \* \* \*

Please direct your questions or comments regarding the Company's responses to the undersigned at (650) 493-9300 or [sbernard@wsgr.com](mailto:sbernard@wsgr.com). Thank you for your assistance.

Sincerely,

WILSON SONSINI GOODRICH & ROSATI  
Professional Corporation

/s/ Steven V. Bernard

Steven V. Bernard

Enclosures  
cc (w/encl.):

Simon Pimstone  
Ian Mortimer  
**Xenon Pharmaceuticals Inc.**

Charles Kim  
**Cooley LLP**

Anthony Lindsay  
**KPMG LLP**