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August 31, 2012

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VIA EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549-4628

Attention: Jeffrey Riedler
Karen Ubell
Daniel Greenspan

Re: A.P. Pharma, Inc.
Registration Statement on Form S-3
Filed August 24, 2012
File No. 333-183549

Ladies and Gentlemen:

On behalf of our client, A.P. Pharma, Inc., a Delaware corporation (the "Company"), we are submitting the following response to the comment letter, dated August 29, 2012 (the "Comment Letter"), of the staff of the Division of Corporation Finance (the "Staff") of the Securities and Exchange Commission (the "Commission") to the Company's registration statement on Form S-3 (the "Registration Statement"). The Registration Statement was filed with the Commission on August 24, 2012.

For reference purposes, the Staff's comment, as reflected in the Comment Letter, is reproduced in bold and the corresponding responses of the Company are shown below the comments.

- We note your shares are currently traded on the OTC Bulletin Board. As the OTC Bulletin Board is not a national securities exchange or an automated quotation system of a national securities association, it appears that you are not eligible to conduct a secondary offering on Form S-3 in reliance on General Instruction I.B.3. to Form S-3. Accordingly, please amend your registration statement to convert to a form for which you are eligible to conduct a secondary offering. Please see Securities Act Forms C&DI 116.12 (February 2009).**

RESPONSE TO COMMENT 1

In response to the Staff's comment, the Company acknowledges that issuers quoted on the OTC Bulletin Board are unable to rely on General Instruction I.B.3 to conduct secondary offerings on Form S-3. However, we note that the Company has a non-affiliate float in excess of \$75 million, which enables the Company to rely on General Instruction I.B.1. to Form S-3, as described in Securities Act Forms C&DI 116.14 (February 2009).

As of August 22, 2012, the Company had outstanding approximately 302,205,000 shares of common stock, of which approximately 193,000,000 were held by non-affiliates. Also on August 22, 2012, the last reported sale price of the Company's common stock on the OTC Bulletin Board was \$0.73. Therefore, as of a date within 60 days of the filing of the Form S-3, the Company had a non-affiliate public float in excess of \$140,000,000. Accordingly, we respectfully submit that the Company is permitted to use Form S-3 to register a secondary offering of its common stock.

The Company hereby acknowledges that (i) the Company is responsible for the adequacy and accuracy of the disclosure in its filing, (ii) Staff comments or changes to disclosure based on Staff comments does not foreclose the Commission from taking any actions with respect to the Company's filing, and (iii) it is the Staff's position that the Company may not assert Staff comments as defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you should have any questions about this letter or require any further information, please call the undersigned at (415) 315-6395.

Sincerely,

/s/ Ryan A. Murr

Ryan A. Murr

cc: John B. Whelan, A.P. Pharma, Inc.