



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

August 30, 2016

Via E-mail

Anish Bhatnagar, M.D.
Chief Executive Officer
Capnia, Inc.
1235 Radio Road, Suite 110
Redwood City, CA 94065

**Re: Capnia, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed August 18, 2016
File No. 333-212487**

Dear Dr. Bhatnagar:

We have limited our review of your amended registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments. Our references to prior comments are to comments in our August 5, 2016 letter.

1. Please expand your response to prior comment 1 to address the purpose of including the Series A redemption – and the related warrant amendment – as part of the Series B transaction. Include an analysis of how the redemption (1) affects whether the selling security holder's investment in the registrant has been in substance at market risk, and (2) reflects the extent of the selling security holder's control of the registrant. Also, tell us:
 - whether and when the selling security holder resold the securities it received on conversion of the Series A Preferred Stock, including whether any of the resales were at or near when the registrant was negotiating the price and terms of the Series B Preferred Stock or the warrant amendment;

- the nature of the voting and lock-up agreements that are conditions to the second closing, including who are the parties to those agreements and their purpose in this transaction;
 - whether the selling security holders provided a written representation regarding their investment intent, or solely indicated that any distribution of the securities would be consistent with the Securities Act;
 - how your response that the selling security holders did not negotiate any covenants impacting the manner in which the registrant conducts its business is consistent with your disclosure on page 48 regarding covenants relating to your ability to issue securities;
 - how Maxim is “receiving proceeds from the” registrant as indicated on page 20 of your response; and
 - the nature of the consideration or services you received for the “placement agent warrants” related to the securities included in this registration statement, given that the other selling security holder appears to have been an existing investor in the registrant.
2. It is unclear how your response to prior comment 2 that the investors are irrevocably bound is reconcilable to your disclosure on page 41 that the agreement merely provides the investor rights to purchase the Series B Convertible Preferred Stock. In addition, we note (1) the statement in your response that a closing condition involves an investor’s judgement as to the impracticability or inadvisability of purchasing the securities, and (2) that the investor appears to have the ability to assign its obligations under the agreement. Please revise the registration statement to register for resale only the common stock underlying the issued and outstanding securities.

Information Incorporated by Reference, page 144

3. Please expand your revisions in response to prior comment 3 to specifically list all filings required to be incorporated by reference by Form S-1 Item 12(a) – not solely the latest amendments – including applicable proxy and information statements filed pursuant to Section 14 of the Exchange Act.

Undertakings, page II-7

4. Please expand your revisions in response to prior comment 4 to include the undertaking required by Regulation S-K Item 512(a)(6).

Anish Bhatnagar, M.D.
Capnia, Inc.
August 30, 2016
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Please contact Tim Buchmiller at (202) 551-3635 or me at (202) 551-3617 with any questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief
Office of Electronics and Machinery

cc: Elton Satusky, Esq.
Wilson Sonsini Goodrich & Rosati