



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 4720

December 31, 2015

Prabhavathi Fernandes, Ph.D.  
President and Chief Executive Officer  
Cempra, Inc.  
6320 Quadrangle Drive, Suite 360  
Chapel Hill, NC 27517

**Re: Cempra, Inc.**  
**Form 10-K for the Fiscal Year Ended December 31, 2014**  
**Filed February 26, 2015**  
**Form 10-Q for the Quarterly Period Ended September 30, 2015**  
**Filed October 22, 2015**  
**File No. 001-35405**

Dear Dr. Fernandes:

We have reviewed your filings and have the following 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2014

Item 1. Business

Intellectual Property, page 27

1. We note that you do not include any of the patent rights licensed from The Scripps Research Institute in the discussion of your intellectual property beginning on page 27. If any of the patent rights that you license from TSRI are material to your business, please provide us proposed disclosure for use in future filings that describes these material patent rights.

2. We refer to your disclosure, “We have also filed additional patent applications pending in the U.S., Australia, Brazil, Canada, China, Europe, Hong Kong, Israel, India, Japan, Mexico, New Zealand, the Russian Federation, Singapore, and South Korea covering solithromycin and related compounds. A few of those applications have already issued as patents. Those patents and applications claim related chemical compounds, pharmaceutical compositions, pharmaceutical formulations, methods for treating particular infections and other diseases, and/or manufacturing processes,” in the seventh paragraph under “Intellectual Property” on page 28. Please provide us proposed expanded disclosure that indicates the jurisdictions and expected expiration dates of these patents and any patents that may issue from the applications.

Collaborations and Commercial Agreements, page 29

3. Please provide us for use in future filings a proposed expanded description of your agreement with The Scripps Research Institute that includes a description of the termination provisions.

Item 10. Directors, Executive Officers and Corporate Governance, page 80

4. We note that you do not include the information required by Item 405 of Regulation S-K or incorporate such information by reference to your definitive proxy statement. Please confirm that you will provide such information in future filings or incorporate such information by reference to your definitive proxy statement as required by Part III, Item 10 of Form 10-K.

Form 10-Q for the Quarterly Period Ended September 30, 2015

Item 6. Exhibits, page 23

5. Please note that the Loan and Security Agreement with Comerica Bank, which was filed as an exhibit to your Form 8-K filed July 16, 2015, should have been listed as an exhibit to your Form 10-Q for the Quarterly Period Ended September 30, 2015 pursuant to Item 601(a)(4) of Regulation S-K. We also note that certain exhibits and schedules to the Loan and Security Agreement do not appear to have been filed, as required by Item 601(b)(10) of Regulation S-K. Please file a full and complete copy of the Loan and Security Agreement with your next periodic report.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

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In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please contact Irene Paik at (202) 551-6553, Amy Reischauer (202)551-3793 or me at (202) 551-3675 with any questions.

Sincerely,  
/s/ Suzanne Hayes

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance