



DIVISION OF
CORPORATION FINANCE

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

January 9, 2012

Via E-Mail

Prabhavathi Fernandes, Ph.D.
President and Chief Executive Officer
Cempra Holdings, LLC (to be converted to Cempra, Inc.)
6340 Quadrangle Drive, Suite 100
Chapel Hill, North Carolina 27517-8149

**Re: Cempra Holdings, LLC
Registration Statement on Form S-1
Amendment No. 2 filed December 22, 2011
File No. 333-177261**

Dear Dr. Fernandes:

We have reviewed your amendment filed December 22, 2011 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 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.

FORM S-1

Critical Accounting Policies and Estimates
Share-Based Compensation, page 50

1. Please refer to prior comment two. We may have additional comments on your accounting for stock compensation and related disclosure once you have disclosed an estimated offering price. At that time, please provide quantitative and qualitative disclosures, explaining the difference between your estimated offering price and the fair value of each equity issuance.
2. Please refer to prior comment three. Please expand your disclosure to quantify the changes in expected timing and assigned probabilities for each exit scenario at each valuation date.

Executive Compensation, pages 102-111

3. Please revise the discussion in this section as appropriate to reflect information for 2011 instead of 2010.

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Dr. Prabhavathi Fernandes
Cempra Holdings, LLC
January 9, 2012
Page 3

You may contact Franklyn Wyman, Staff Accountant, at (202) 551-3660 or Lisa Vanjoske, Assistant Chief Accountant, at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact John Krug, Senior Counsel, at (202) 551-3862, Dan Greenspan, Branch Chief, at (202) 551-3623, or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Daniel S. Greenspan

Jeffrey Riedler
Assistant Director

cc: Alexander M. Donaldson, Esq.
Wyrick Robbins Yates & Ponton LLP
4101 Lake Boone Trail, Suite 300
Raleigh, North Carolina 27607