



DIVISION OF
CORPORATION FINANCE

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

June 26, 2014

Via E-mail

Alain Castro
Chief Executive Officer
Ener-Core, Inc.
9400 Toledo Way
Irvine, California 92618

**Re: Ener-Core, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed June 19, 2014
File No. 333-196046**

Dear Mr. Castro:

Please respond to this letter by amending your registration statement and providing the requested information. Where 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.

Selling Stockholders, page 20

1. We note that while you have deleted other references, on page 3 you still refer to the registration of an additional 8,629,243 shares for sale by your selling stockholders to cover accrued interest and adjustments to the conversion price. In the footnotes to the tabular disclosure here, please make apparent the amount of additional shares that each selling stockholder will be registering in this prospectus due to adjustments to the conversion price of your Notes.
2. Please explain why you ignore adjustments to the conversion price of the Notes when calculating beneficial ownership in the second column, despite the fact that such adjustments have already been made, and you reflect these adjustments in footnote 20 to your tabular disclosure.

Director Compensation and Agreements, page 62

3. Please revise to reinsert the deleted discussion of your compensation agreement with Dr. Johnson. It was in effect for fiscal year 2013, the year that you are providing disclosure for. In addition, please remove Mr. Horn from your Director Compensation Table, as he was not a director in fiscal year 2013.

Description of Securities, page 67

Senior Secured Convertible Notes, page 67

Conversion, page 68

4. This heading describes the conversion feature of the notes, but does not address market-based adjustments of the conversion price. Rather, market-based adjustment mechanism is discussed under the following heading. Please revise to make apparent that, in conjunction with payment of an Installment Amount with shares of your common stock, the full ratchet provision would operate to permanently lower the conversion price of your notes (in the absence of reverse stock splits). We reissue comment 5 of our letter dated June 5, 2014.

Number of Shares Issuable in Satisfaction of the Notes Based on Various Assumed Conversion Prices, page 71

5. Please revise your disclosure here and elsewhere to reflect the fact that the conversion price of your Notes has already declined to \$0.35, and may decline further.

Exhibit 5.1

6. We note that your opinion still does not reflect the fact that the November Shares have already been issued. We partially reissue comment 6 of our letter dated June 5, 2014.

Please contact Leland Benton at (202) 551-3791 or Craig Slivka at (202) 551-3729 with any other questions.

Sincerely,

/s/ Craig Slivka, for

Pamela Long
Assistant Director

cc: Francis Chen, Esq. (*via e-mail*)
LKP Global Law, LLP