



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

DIVISION OF
CORPORATION FINANCE

February 11, 2014

Via E-mail

Alison Bauerlein
Chief Financial Officer
Inogen, Inc.
326 Bollay Drive
Goleta, California 93117

**Re: Inogen, Inc.
Amendment No. 4 to Registration Statement on Form S-1
Filed February 4, 2014
File No. 333-192605**

Dear Ms. Bauerlein:

We have reviewed your filing and have the following comments. In 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.

Dilution, page 52

1. We note mathematical errors in the calculation of dilution. This includes, but is not limited to, the impact of increasing and decreasing by 1,000,000 shares the number of shares included in the offering on pro forma as adjusted net tangible book value per share and on the dilution per share experienced by investors if 1,000,000 less shares were included in the offering. Please amend the filing prior to requesting effectiveness to correct these mathematical errors.

Principal and selling stockholders, page 155

2. Refer to the last sentence of prior comment 5. It remains unclear from your disclosure which of the shares mentioned in the footnotes are being offered by the selling stockholders. For example, is Novo A/S offering the shares previously held or the shares underlying the warrants? If it is offering the shares underlying the warrants, when will it acquire those shares, and what is the exercise price? Please clarify.

3. Please expand your response to prior comment 5 to tell us whether any of the selling stockholders are broker-dealers or affiliates of broker dealers. For each selling stockholder that is an affiliate of a broker-dealer, please disclose, if true, that:
 - the selling stockholder purchased the offered shares in the ordinary course of business and,
 - at the time of the purchase of the securities to be resold, the seller had no agreements or understandings, directly or indirectly, with any person to distribute the securities.
4. Please reconcile the total number of shares being offered by the selling shareholders as disclosed in the table on page 156 with the information on your prospectus cover.

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 specific 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.

Alison Bauerlein
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You may contact Kevin Kuhar, Staff Accountant, at (202) 551-3662 or Kaitlin Tillian, Assistant Chief Accountant, at (202) 551-3604 if you have questions regarding comments on the financial statements and related matters. Please contact Ted Moskovitz at (202) 551-3689 or me at (202) 551-3617 with any other questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief

cc (via e-mail): Martin J. Waters