



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

DIVISION OF  
CORPORATION FINANCE

November 25, 2014

Via E-mail

David P. Southwell  
President and Chief Executive Officer  
Inotek Pharmaceuticals Corporation  
131 Hartwell Avenue, Suite 105  
Lexington, MA 02421

**Re: Inotek Pharmaceuticals Corporation  
Amendment No. 1 to Registration Statement on Form S-1  
Filed November 21, 2014  
File No. 333-199859**

Dear Mr. Southwell:

We have reviewed your amended registration statement and have the following additional 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 providing the requested information and amending your registration statement. 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 the information you provide in response to these comments, we may have additional comments.

Capitalization, Page 62

1. Please expand your pro forma disclosures throughout the filing to explain why assuming that the Series AA redeemable convertible preferred stock will be converted into common stock is factually supportable. Your disclosure on F-20 indicates that automatic conversion occurs only if the price per share in a firmly underwritten public offering is not less than \$7.65. Refer to rule 11-02(b)(6) of Regulation S-X.

Notes to Consolidated Financial Statements

7. Equity

2014 Stock Option and Incentive Plan, page F-24

2. Please refer to comment 2. It is unclear how you have sufficiently addressed the reasons for the differences between recent valuations of your common stock leading up to the IPO and the estimated offering price considering the significant increase in the fair value

from the August 28, 2014 issuance to the midpoint of your price range. Please revise your analysis to address the following items:

- Quantify the impact of the fair value increase attributed to the top line results received in October 2014 from the Phase 2 trial in which patients received trabodensoson eye drops co-administered with latanoprost eye drops;
- Quantify the discount for lack of marketability and tell us how you determined that it was appropriate; and
- Tell us how you determined that the probabilities of the three possible future scenarios for the Company were appropriate given the DRS was filed August 29, 2014 and the equity capital markets have been highly receptive to early-stage biotechnology life sciences companies in 2014 as noted in your response.

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.

You may contact Scott Wuenschell at (202) 551-3705 or Joel Parker at (202) 551-3651 if you have questions regarding comments on the financial statements and related matters. Please

David P. Southwell  
Inotek Pharmaceuticals Corporation  
November 25, 2014  
Page 3

contact Austin Stephenson at (202) 551-3192, Bryan Pitko at (202) 551-3203, or me at (202) 551-3715 with any other questions.

Sincerely,

*/s/ Bryan J. Pitko* for

Jeffrey P. Riedler  
Assistant Director

cc: Via E-mail  
Mitchell S. Bloom, Esq.  
Goodwin Procter LLP