



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 4720

June 3, 2016

Werner Cautreels, Ph.D.
President and Chief Executive Officer
Selecta Biosciences, Inc.
480 Arsenal Street, Building One
Watertown, MA 02472

**Re: Selecta Biosciences, Inc.
Registration Statement on Form S-1
Filed May 24, 2016
File No. 333-211555**

Dear Dr. Cautreels:

We have reviewed your registration statement 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.

"Clinical drug development involves a lengthy an expensive process..." page 21

1. Please revise this risk factor to describe the serious adverse events observed in your Phase 1b clinical trial discussed on page 131.

Business, page 105

2. We note your statement that your first gene therapy program is targeted to treat a rare genetic disease and that you are developing a second gene therapy for a genetic metabolic disorder. Please expand your description of these programs to identify the indications.

Notes to Consolidated Financial Statements

12. Revenue arrangements

Sanofi collaboration agreement, page F-36

3. Please disclose each milestone and its amount included within the further development milestones which may aggregate up to \$127.0 million. Refer to ASC 605-28-50-2.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Use of Estimates

Stock Based Compensation, page 96

4. Please refer to your May 31, 2016 letter regarding the estimated public offering price per share for your proposed initial public offering and the accounting treatment for share-based compensation. Please reconcile for us the difference between the fair value as of the most recent valuation date and the mid-point of your estimated IPO price range. Include an explanation for each significant factor contributing to the difference.

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

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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 Jacob Luxenburg at (202) 551-2339 or James Rosenberg at (202) 551-3679 if you have questions regarding comments on the financial statements and related matters. Please contact Michael Gershon at (202) 551-6598 or Amy Reischauer at (202) 551-3793 with any other questions.

Sincerely,

/s/ Amy Reischauer for

Suzanne Hayes
Assistant Director
Office of Healthcare and Insurance

cc: Brandon J. Bortner, Esq.