



DIVISION OF
CORPORATION FINANCE

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

September 12, 2017

Joshua R. Disbrow
Chief Executive Officer
Aytu Bioscience, Inc.
373 Inverness Parkway, Suite 206
Englewood, Colorado 80112

**Re: Aytu Bioscience, Inc.
Registration Statement on Form S-1
Filed September 5, 2017
File No. 333-220351**

Dear Mr. Disbrow:

We have limited our review of your registration statement to those issues we have addressed in our 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 filed September 5, 2017

Incorporation of Documents by Reference, page 50

1. Please revise this section to incorporate by reference all Current Reports on Form 8-K filed since the end of your fiscal year. See Item 12(a)(2) of Form S-1.

General

2. We note that you have a pending request for confidential treatment. Please be advised that we will not be in a position to declare your registration statement effective until we resolve any issues concerning the confidential treatment request.

Joshua R. Disbrow
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We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Irene Paik at 202-551-6553 or Mary Beth Breslin at 202-551-3625 with any questions.

Division of Corporation Finance
Office of Healthcare & Insurance

cc: Marcelle Balcombe - Sichenzia Ross Ference
Kesner LLP