

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

November 18, 2019

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

Re: Aytu BioScience, Inc.
Preliminary Proxy Statement on Schedule 14A
Filed November 4, 2019
File No. 001-38247

Dear Mr. Disbrow:

We have reviewed your filing 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Preliminary Proxy Statement on Schedule 14A

Nasdaq Rule 5635(d) Proposal, page 7

1. Please revise to disclose how you have used or how you intend to use the proceeds from the transaction discussed in this proposal, including the approximate amount devoted to each purpose if determinable. Refer to Item 11(c)(2) of Schedule 14A.

Conversion Proposal, page 11

2. Please revise your disclosure to provide the information required by Items 11, 13 and 14 with respect to the Cerecor acquisition. Refer to Note A of Schedule 14A.

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.

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Please contact Ada D. Sarmento at 202-551-3798 or Irene Paik at 202-551-6553 with any questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Anthony Epps, Esq.