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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4546

September 14, 2016

Dr. Lynn Seely
Principal Executive Officer
Myovant Sciences Ltd.
Clarendon House
2 Church Street
Hamilton HM 11, Bermuda

Re: Myovant Sciences Ltd.
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted August 26, 2016
CIK No. 0001679082

Dear Dr. Seely:

We have reviewed your amended draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 and your amended draft registration statement or filed registration statement, we may have additional comments.

Company Overview, page 1

1. We note your response to prior comment 2 and your revision to the table on page 2. However, since your disclosures indicate that you have not commenced a Phase 1 trial for RVT-602 for the indication specified, please revise the third column of the table so that it does not reflect that you have commenced Phase 1 for the indication.

Our Solution for Women's Health Indications, page 79

2. We refer to your new disclosures in the bottom paragraph of page 79. Please revise to disclose who conducted the randomized clinical trials and when they were conducted.

3. We refer to your new disclosures at the top of page 81. Please revise the first paragraph on page 81 to explain briefly the results depicted in the graphs below it. In this regard, it is not clear to us whether the testing results indicate that hormone levels returned to the same baseline level given the apparent differences in the median serum estradiol pg/mL recorded at initiation of relugolix administration (graph 1) as compared to the recording four weeks following discontinuation of administration (graph 2). Also, revise to disclose whether you, Takeda or another third-party conducted the testing reflected in these graphs. Please also disclose whether these results are statistically significant.

Facilities, page 113

4. We note the disclosures added concerning your Swiss subsidiary. Please revise to clarify whether you presently have facilities in Basel and whether you are or will be conducting R&D activities in this space. Please also revise to discuss the general character of your facility in Bermuda as well as any other disclosures required by Regulation S-K, Item 102.

You may contact Christine Torney at 202-551-3652 or Lisa Vanjoske, Assistant Chief Accountant, at 202-551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Dorrie Yale at 202-551-8776 or Joseph McCann at 202-551-6262 with any other questions.

Sincerely,

/s/ Joseph McCann for

Suzanne Hayes
Assistant Director
Office of Healthcare and Insurance

cc: Frank F. Rahmani, Esq. — Cooley LLP