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VIA EDGAR AND OVERNIGHT COURIER

October 12, 2016

U.S. Securities and Exchange Commission
Division of Corporation Finance
Mail Stop 4546
Washington, D.C. 20549

Attn: Suzanne Hayes, Assistant Director
Dorrie Yale, Staff Attorney
Joseph McCann, Staff Attorney
Lisa Vanjoske, Assistant Chief Accountant
Christine Torney, Accountant

RE: Myovant Sciences Ltd.
Registration Statement on Form S-1
Filed September 30, 2016
File No. 333-213891

Ladies and Gentlemen:

On behalf of Myovant Sciences Ltd. (the "***Company***"), we are providing this letter in response to a letter, dated October 11, 2016, received from the staff of the U.S. Securities and Exchange Commission's Division of Corporation Finance (the "***Staff***") with respect to the Company's Registration Statement on Form S-1, filed on September 30, 2016 (the "***Registration Statement***"). The Company is concurrently filing an Amendment No. 1 to the Registration Statement (the "***Amended Registration Statement***"), which reflects changes made in response to certain of the comments contained in such letter and certain other changes. We are also sending the Staff a copy of this letter, along with a copy of the Amended Registration Statement, which is marked to show the changes made to the Registration Statement.

The numbering of the paragraphs below corresponds to the numbering of the comments in the letter received from the Staff, which for your convenience we have incorporated into this response letter in italics. Page references in the text of the Company's responses set forth below correspond to the page numbers of the Amended Registration Statement. Capitalized terms used in this letter but not otherwise defined in this letter have the meanings assigned to them in the Amended Registration Statement.

Company Overview, page 1

1. *Please tell us how your disclosure on page 2 concerning the exclusivity of the license is consistent with the sublicense terms contained in section 3.3.4 of Exhibit 10.1.*

The Company acknowledges the Staff's comment and respectfully advises the Staff that, as disclosed on page 2 of the Amended Registration Statement, the territory for the Company's exclusive, royalty-bearing license for relugolix from Takeda Pharmaceuticals International AG ("***Takeda***") covers all countries of the world other than Japan, China, Hong Kong, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand and Vietnam (including, in each case, the territories and possessions of each of the foregoing), to which Takeda retains exclusive rights. The Company further respectfully submits to the Staff that the sublicense referenced in section 3.3.4 of Exhibit 10.1 is limited to rights to relugolix in Japan, and because Japan is excluded from the territory covered by the Company's exclusive license, such sublicense terms are consistent with the Company's disclosure on page 2 of the Amended Registration Statement.

Our Solution for Women's Health Indications, page 81

2. *We note your revised disclosures on page 81 in response to our prior comment 3. Please also explain why the baseline for the mean serum estradiol at the beginning of treatment (graph 1) is different than the baseline at four weeks after treatment (graph 2). Also, explain to us why you represent the mean in one graph and the median in the other one.*

The Company supplementally advises the Staff that the baseline values for the mean serum estradiol levels in the two graphs appearing on page 81 of the Registration Statement are different because they are measured at different points in time. The first graph shows serum estradiol following treatment initiation and the baseline occurs at the beginning of study treatment. The second graph shows serum estradiol following treatment discontinuation and the baseline occurs after six months of treatment, at the end of study treatment and the beginning of the follow-up period. The Company further submits to the Staff that the fluctuation in estradiol levels in the placebo group shown in these graphs reflects the natural fluctuation of estradiol levels in women of reproductive age during the normal menstrual cycle, and that the small difference observed between the placebo and relugolix groups in the second graph is within the range of normal estradiol fluctuation. The Company has reviewed and revised the disclosure on page 81 of the Amended Registration Statement to present mean serum estradiol levels in both graphs and to clarify the foregoing.

Employees, page 114

3. *We note the revised disclosure reflecting a recent increase to your staffing. In light of your disclosures on pages 114 and elsewhere indicating that you anticipate conducting extensive research and development efforts, please revise your discussion concerning employees to indicate how many of them are engaged in research and development activities.*

The Company has revised the disclosure on page 115 of the Amended Registration Statement.

Facilities, page 114

4. *We note your revised disclosure on this page in response to our prior comment 4. Please clarify whether you are or will be leasing space from Roivant in the various locations you reference, including Basel, and whether R&D activities are or will be conducted in such spaces.*

The Company has revised the disclosure on page 115 of the Amended Registration Statement.

Please contact me at (650) 843-5753 with any questions or further comments regarding our responses to the Staff's comments.

Sincerely,

/s/ Frank F. Rahmani

Frank F. Rahmani

cc: Lynn Seely, M.D., *Myovant Sciences, Inc.*
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