

February 20, 2018

VIA EDGAR

Division of Corporation Finance
United States Securities and Exchange Commission
100 F Street, N.E.
Mail Stop 4546
Washington, D.C. 20549

Attention: Ms. Ada D. Sarmiento, Senior Counsel

**Re: Acceleration Request of Organovo Holdings, Inc.
Registration Statement on Form S-3, filed February 8, 2018
(File No. 333-222929)**

Ladies and Gentlemen:

Pursuant to Rules 460 and 461 under the Securities Act of 1933, as amended, Organovo Holdings, Inc. (the “**Registrant**”) hereby requests that the Securities and Exchange Commission (the “**Commission**”) accelerate the effectiveness of the above-referenced Registration Statement, to 4:00 p.m., Eastern Time, on Thursday, February 22, 2018, or as soon thereafter as practicable.

Thank you for your assistance. If you should have any questions, please contact Ryan Gunderson of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, counsel to the Registrant, at (858) 436-8046.

Very truly yours,

/s/ Craig Kussman

Craig Kussman
Chief Financial Officer