

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

November 4, 2019

Richard Toselli, M.D. Chief Executive Officer InVivo Therapeutics Holdings Corp. One Kendall Square, Suite B14402 Cambridge, MA 02139

> Re: InVivo Therapeutics Holdings Corp. Registration Statement on Form S-3 Filed October 28, 2019 File No. 333-234353

Dear Mr. Toselli:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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.

Please contact Ada D. Sarmento at 202-551-3798 with any questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Rosemary G. Reilly, Esq.