



DIVISION OF  
CORPORATION FINANCE

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

October 14, 2020

Richard Toselli, M.D.  
President and 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-1  
Filed October 7, 2020  
File No. 333-249353**

Dear Dr. 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 Deanna Virginio at 202-551-4530 with any questions.

Sincerely,

Division of Corporation Finance  
Office of Life Sciences

cc: Rosemary G. Reilly, Esq.