

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

August 19, 2022

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.
Preliminary Proxy Statement on Schedule 14A
Filed July 8, 2022
File No. 001-37350

Dear Dr. Toselli:

We have completed our review of your filing. 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.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Rosemary Reilly, Esq.