InVivo Therapeutics Holdings Corp. One Kendall Square, Suite B14402 Cambridge, MA 02139

June 2, 2020

VIA EDGAR

Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, D.C. 20549

Re: InVivo Therapeutics Holdings Corp.

Registration Statement on Form S-1

File No. 333-238635 Request for Acceleration

Ladies and Gentlemen:

Pursuant to Rule 461 promulgated under the Securities Act of 1933, as amended, InVivo Therapeutics Holdings Corp. hereby requests acceleration of the effective date of its Registration Statement on Form S-1 (File No. 333-238635), so that it may become effective at 4:00 p.m. on June 4, 2020, or as soon thereafter as practicable.

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Very truly yours,

INVIVO THERAPEUTICS HOLDINGS CORP.

By: /s/ Richard Toselli Name: Richard Toselli

Title: President and Chief Executive Officer

Signature Page to Acceleration Request