



September 11, 2019

VIA EDGAR

Securities and Exchange Commission
Division of Corporation Finance
Office of Electronics and Machinery
100 F Street, NE
Washington, D.C. 20549
Attention: Ms. Julie Sherman

Re: INVIVO THERAPEUTICS HOLDINGS CORP.
Form 10-K for the Year Ended December 31, 2018
Filed April 1, 2019
Form 10-Q for the Quarterly Period Ended June 30, 2019
Filed August 13, 2019
File No. 001-37350

Dear Ms. Sherman:

We note the receipt by InVivo Therapeutics Holdings Corp. (the "Company") of the comment letter (the "Comment Letter") dated September 3, 2019 from the staff (the "Staff") of the Division of Corporation Finance, Office of Electronics and Machinery of the United States Securities and Exchange Commission (the "SEC") regarding the Company's above-referenced 10-K and 10-Q. The Company hereby provides the response set forth below to the Staff's comment contained in the Comment Letter. To assist the Staff review, the Company has included the text of the Staff's comment below in italic type.

SEC Comment:

Form 10-Q for the period ended June 30, 2019

Item 4. Controls and Procedures
Evaluation of Disclosure Controls and Procedures, page 29

1. *"We note the disclosures presented in this section relating to management's assessment of the effectiveness of your internal control over financial reporting (ICFR) at June 30, 2019 and management's conclusion that your ICFR was not effective at that date. Please revise your future Forms 10-Q to provide the required disclosure regarding the conclusion of your principal executive and principal financial officers on the effectiveness of your disclosure controls and procedures as of the end of the period covered by the report, based on the evaluation of these controls and procedures required by Exchange Act Rules 13a-15 and 15d-15. Please note that the disclosures outlined in Item 307 of Regulation S-K and required by Item 4 of Form 10-Q are separate from the annual ICFR disclosures required by Item 308(a) of Regulation S-K."*
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Company's Response to SEC Comment:

1. The Company acknowledges the Staff's comments and will revise accordingly in future filings. Specifically, the Company's future Forms 10-Q will provide the required disclosure regarding the conclusion of our principal executive and principal financial officers on the effectiveness of our disclosure controls and procedures as of the end of the period covered by each report, based on the evaluation of these controls and procedures required by Exchange Act Rules 13a-15 and 15d-15. The Company acknowledges that the disclosures outlined in Item 307 of Regulation S-K and required by Item 4 of Form 10-Q are separate from the annual ICFR disclosures required by Item 308(a) of Regulation S-K.

Please let me know if you have any questions regarding the response contained in this letter, have additional questions or need any additional information. I can be reached at (508) 574-0149 or rchristopher@invivotherapeutics.com.

Sincerely,

Richard Christopher
Chief Financial Officer
InVivo Therapeutics Holdings Corp.
One Kendall Square
Building 1400 West, 4th floor
Suite B14402
Cambridge, MA 02139
