

September 3, 2019

Richard Christopher
Chief Financial Officer
INVIVO THERAPEUTICS HOLDINGS CORP.
One Kendall Square
Suite B14402
Cambridge, MA 02139

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 Mr. Christopher:

We have limited our review of your filing to the financial statements and related disclosures and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this comment within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing your response to this comment, we may have additional comments.

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

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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.

In closing, 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.

You may contact Julie Sherman at (202) 551-3640 or Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any questions.

FirstName LastNameRichard Christopher
Company NameINVIVO THERAPEUTICS HOLDINGS CORP.

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FirstName LastName

Sincerely,
Division of Corporation Finance
Office of Electronics and Machinery