

August 7, 2018

Office of Healthcare and Insurance
Division of Corporation Finance
United States Securities and Exchange Commission
Washington, D.C. 20549

Re: Leap Therapeutics, Inc.
Form 10-K for the Year Ended December 31, 2017
Filed February 23, 2018
Form 10-Q for the Quarterly Period Ended March 31, 2018
Filed May 11, 2018
File No. 001-37990

Ladies and Gentlemen:

This letter is being furnished in response to the letter dated July 25, 2018 (the "Comment Letter") received from the Staff (the "Staff") of the U.S. Securities and Exchange Commission (the "Commission") addressed to Douglas E. Onsi, Chief Financial Officer of Leap Therapeutics, Inc., a Delaware corporation (the "Company"), regarding the financial statements and related disclosures of the Company in its Form 10-Q for the quarterly period ended March 31, 2018, File No. 001-37990, filed on May 11, 2018. The Company has reviewed the Comment Letter and our response is set forth below.

For ease of reference, the comment contained in the Comment Letter is printed below in bold and is followed by the Company's response.

Form 10-Q for the Quarter Ended March 31, 2018

Exhibits 31.1 and 32.2

1. The officer certifications do not include the language referring to internal control over financial reporting that should appear in the introductory sentence of paragraph 4 and paragraph 4(b) as required by Exchange Act Rule 13a-14(a) and Item 601(b)(31) of Regulation S-K. Please file an amendment to your Form 10-Q containing full Item 4 disclosure as well as the company's financial statements that includes correct certifications.

Response:

Pursuant to the Staff's comment, the Company has amended its Form 10-Q for the quarterly period ended March 31, 2018, File No. 001-37990, filed on May 11, 2018 for the purpose of correcting the inadvertent omission of the language required by Item 601(b)(31) of Regulation S-K related to internal control over financial reporting that should appear in the introductory sentence of paragraph 4 and paragraph 4(b) of the officer certifications attached as Exhibits 31.1 and 31.2 thereto. The Company will continue to include the certifications that match exactly the form set forth in Item 601(b)(31) of Regulation S-K in its future filings with the Commission, as applicable.

If you have questions or additional comments regarding any of the information set forth in

this letter, please call me at (617) 218-1116.

Sincerely,

/s/ Douglas E. Onsi

Douglas E. Onsi
Chief Financial Officer, General Counsel, Secretary
and Treasurer

Cc: SiSi Cheng, *Securities and Exchange Commission*
Ibolya Ignat, *Securities and Exchange Commission*
Julio E. Vega, *Morgan, Lewis & Bockius LLP*
Kristen E. Ferris, *Morgan, Lewis & Bockius LLP*
