



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4546

November 15, 2016

Christopher K. Mirabelli, Ph.D.  
Chairman, President and Chief Executive Officer  
Leap Therapeutics, Inc.  
47 Thorndike Street, Suite B1-1  
Cambridge, MA 02141

**Re: Leap Therapeutics, Inc.  
Amendment No. 1 to  
Registration Statement on Form S-4  
Filed November 1, 2016  
File No. 333-213794**

Dear Dr. Mirabelli:

We have reviewed your November 1, 2016 letter and amended registration statement 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 letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our October 23, 2016 letter.

Questions and Answers about the Merger and the Special Meeting

Q: What will Macrocare shareholders receive if the merger is consummated?.. page 5

1. We note your revision to the cover page of your prospectus in response to our prior comment four. Please revise the second paragraph of this section to include the number of shares of common stock to be issued for each Macrocare share based on range of possible net cash values. Please ensure that your disclosure includes the number of shares of common stock to be issued if Macrocare's net cash is determined to be zero.

Notes to Unaudited Pro Forma Condensed Combined Financial Statements

2. Shares to be issued by Leap in exchange for outstanding ordinary shares of Macrocare, page 12

2. Refer to your response to our prior comment 32 and tell us why Series C Preferred stock converts to common stock at a one-to-one ratio. It does not appear that you issued Series C Preferred stock at its conversion price of \$2.39 per share.

The Merger

Background of the Merger, page 58

3. We note your disclosure on page 59 that on March 7, 2016, Mr. Mashiach and Mr. Onsi discussed relative equity ownership, valuation, board representation and due diligence. Please expand your disclosure to provide more details about the contents of these discussions, including Macrocare's and Leap's positions, if any, on these topics.
4. We note your disclosure on page 59 that at the board meeting held on March 15, 2016, the directors considered both the indication of potential interest from Leap as well as from another private company focused on biotherapeutics, but decided to move forward with Leap. Please expand your disclosure to discuss why you decided to move forward with Leap and not with the other private company.

Likelihood of Consummation, page 67

5. We note your response to our prior comment 26 and reissue in part. Please revise your disclosure in the first bullet point of this section to discuss the condition that Macrocare obtain the Section 104H Tax Ruling from the Israel Tax Authority. Please also revise your disclosure in the discussion of Regulatory Approvals on page 100 to provide that the merger agreement requires the approval of the Israel Registrar of Companies and that Macrocare obtain the Section 104H Tax Ruling from the Israel Tax Authority.

Business

Our Products, page 132

6. Please revise your chart so that it accurately reflects the stage for each of your products and particular indications. For example, the chart suggests that DKN-01 has completed Phase 1/2 trials for both DKN-01 while the disclosure indicates that Phase 1/2 trials are ongoing. The disclosure also suggests that TRX518 is in Phase 1 but the chart states that it is in Phase 1/2. Please revise the graph as appropriate.

DKN-01, page 132

7. We note your revisions in response to our prior comment 36. However, we note your statement on page 140 that single doses of TRX518 have been well tolerated and have been found to be safe with dose proportionate increases in TRX518 exposure. Please revise to remove this statement, as it is premature for you to describe your clinical stage products as safe.

Lonza License Agreement, page 144

8. We note your response to our prior comment 41 that you have not included the royalty rate as you have applied for confidential treatment for certain portions of the Lonza Agreement, including the royalty rate. However, we consider royalty rates to be material information to investors. As such, please revise your disclosure to include the potential range of royalty payments (for example, “low single digits” or “high single digits”).

You may contact Keira Nakada at (202) 551-3659 or James Rosenberg, Senior Assistant Chief Accountant, at (202) 551-3679 if you have questions regarding comments on the financial statements and related matters. Please contact Irene Paik at (202) 551-6553 or Erin Jaskot at (202) 551-3442 with any other questions.

Sincerely,

/s/ Erin K. Jaskot, *for*

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Julio E. Vega  
Morgan, Lewis & Bockius LLP