



DIVISION OF
CORPORATION FINANCE

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

April 19, 2018

Keith R. Leonard, Jr.
Chairman and Chief Executive Officer
Unity Biotechnology, Inc.
3280 Bayshore Blvd
Brisbane, CA 94005

Re: Unity Biotechnology, Inc.
Registration Statement on Form S-1
Filed April 5, 2018
File No. 333-224163

Dear Mr. Leonard:

We have reviewed your 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 March 28, 2018 letter.

Registration Statement on Form S-1

Business

Licenses and Collaborations, page 132

1. We note your responses to our prior comments 4 and 11. We note that UBX0101 appears to be your most advanced product candidate and that you co-own a patent family with the Buck Institute for Research on Aging, the John Hopkins University, and Mayo Clinic directed toward the use of UBX0101 for the treatment of osteoarthritis. Please file these agreements as exhibits or provide further analysis as to why you are not required to file these agreements as exhibits pursuant to Item 601(b)(10) of Regulation S-K.

Keith R. Leonard, Jr.
Unity Biotechnology, Inc.
April 19, 2018
Page 2

Principal Stockholders, page 168

2. We note your response to our prior comment 12. With respect to Venrock, please disclose in footnote 3, as you did in your response, that the investment and voting decisions are made jointly by three or more individuals associated with their sole general partner, Venrock Management. With respect to the Mayo Clinic, please revise your disclosure in footnote 4 to identify the natural person or persons with whom Mr. Hoffman shares voting and investment control. With respect to Baillie Gifford & Co., please disclose in footnote 5, as you did in your response, that the investment and voting decisions of SMIT and EWIT are made jointly by three or more individuals of their agent, Baillie Gifford & Co.

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.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Vanessa Robertson at 202-551-3649 or Lisa Vanjoske at 202-551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Jeffrey Gabor at 202-551-2544 or Ada Sarmiento at 202-551-3798 with any other questions.

Division of Corporation Finance
Office of Healthcare & Insurance

cc: Brian Cuneo, Esq.