

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

October 5, 2021

Suying Liu, Ph.D.
Chief Executive Officer
Mountain Crest Acquisition Corp II
311 West 43rd Street
12th Floor
New York, NY 10036

Re: Mountain Crest Acquisition Corp II
Amendment No. 4 to Registration Statement on Form S-4
Filed October 4, 2021
File No. 333-255493

Dear Dr. Liu:

We have reviewed your 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 [Month day, year] letter.

Amendment No. 4 to Registration Statement on Form S-4

Material U.S. Federal Tax Consequences

Material U.S. Federal Income Tax Considerations of the Business Combination for BTX Stockholders, page 118

1. Refer to prior comment 1. Please explain why counsel cannot give a "will" opinion with respect to whether the Business Combination qualifies for U.S. federal income tax purposes as a "reorganization" within the meaning of the IRC. If counsel intends to provide a "should" opinion, please (1) revise the disclosure to describe the degree of uncertainty and explain the facts or circumstances giving rise thereto and (2) add risk factor and/or other appropriate disclosure setting forth the risks of uncertain tax treatment

Suying Liu, Ph.D. Mountain Crest Acquisition Corp II October 5, 2021 Page 2

to investors. For guidance, see Section III.C.4 of Staff Legal Bulletin No. 19.

You may contact Li Xiao at 202-551-4391 or Daniel Gordon at 202-551-3486 if you have questions regarding comments on the financial statements and related matters. Please contact Lauren Hamill at 303-844-1008 or Christopher Edwards at 202-551-6761 with any other questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Andrei Sirabionian, Esq.