



DIVISION OF
CORPORATION FINANCE

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

September 1, 2021

Allen Davidoff
President and Chief Executive Officer
XORTX Therapeutics Inc.
Suite 4000, 421 – 7th Avenue SW
Calgary, Alberta, Canada T2P 4K9

Re: XORTX Therapeutics Inc.
Registration Statement on Form F-1
Filed August 11, 2021
File No. 333-258741

Dear Mr. Davidoff:

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.

Registration Statement on Form F-1

Our Proprietary Pipeline-in-a-Product, page 2

1. We note your revised disclosure stating that oxypurinol may be used "as an effective alternative" to allopurinol. Efficacy is a determination solely within the purview of the FDA and similar foreign regulators. Please revise your disclosure to remove this claim.
2. We note your response to prior comment 4 and revised disclosure. Please clarify whether all of the patients in the two studies mentioned were intolerant of allopurinol. To the extent not all patients were intolerant of allopurinol, please specify what percentage of patients were intolerant of allopurinol and how many of those patients were able to tolerate oxypurinol. Also, disclose the year when the two referenced studies were conducted.

Allen Davidoff
XORTX Therapeutics Inc.
September 1, 2021
Page 2

Risk Factors

Common Share Purchase Warrants are speculative in nature., page 53

3. Your disclosure is unclear regarding whether this risk factor applies to both the Common Share Purchase Warrants and the pre-funded warrants or only to the Common Share Purchase Warrants. Please advise.

Capitalization, page 64

4. You have included your current liabilities, Accounts payable and accrued liabilities and Derivative warrant liability, in your Capitalization table. Please tell us why these amounts are appropriate to be included or remove them from the table.

Business

Product Candidates, page 76

5. We note your response to prior comment 10. We further note that your disclosure throughout the prospectus indicates that you have not commenced any Phase 3 clinical trials. Accordingly, please remove the arrows in the Phase 3 column for XR_x-008 and XR_x-101.

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 Jeanne Bennett at 202-551-3606 or Mary Mast at 202-551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact Alan Campbell at 202-551-4224 or Joe McCann at 202-551-6262 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Anthony W. Epps