



DIVISION OF  
CORPORATION FINANCE

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

May 16, 2024

Charles R. Carter  
Chief Financial Officer  
Cero Therapeutics Holdings, Inc.  
201 Haskins Way, Suite 230  
South San Francisco, CA 94080

**Re: Cero Therapeutics Holdings, Inc.  
Registration Statement on Form S-1  
Filed May 6, 2024  
File No. 333-279156**

Dear Charles R. Carter:

We have conducted a limited review of your registration statement and have the following comments.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe a comment applies 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 this letter, we may have additional comments.

Registration Statement on Form S-1 Filed May 6, 2024

Cover Page

1. For each of the shares being registered for resale, disclose the price that the Selling Securityholders paid for such shares.

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2. We note your disclosure that all of your Warrants are out of the money and that the holders of such Warrants are not likely to exercise their Warrants. To the extent it is unlikely that the Warrant holders would exercise their Warrants, describe the impact on your liquidity and update to discuss your ability to fund your operations on a prospective basis with your current cash on hand. Provide similar disclosure in the "Liquidity and Capital Resources" section starting on page 128.

#### Risk Factors

Certain existing securityholders purchased our securities at a price below the current trading price of such securities..., page 13

3. Please revise to also disclose the potential profit the Selling Securityholders will earn based on the current trading price.

#### Management's Discussion and Analysis of Financial Condition and Results of Operations of Cero

Liquidity and Capital Resources, page 128

4. In light of the significant number of redemptions and the unlikelihood that the company will receive significant proceeds from exercises of the Warrants because of the disparity between the exercise price of the Warrants and the current trading price of the Common Stock, expand your discussion of capital resources to address any changes in the company's liquidity position since the business combination. If the company is likely to have to seek additional capital, discuss the effect of this offering on the company's ability to raise additional capital.

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.

Please contact Tamika Sheppard at 202-551-8346 or Tim Buchmiller at 202-551-3635 with any other questions.

Sincerely,

Division of Corporation Finance  
Office of Life Sciences

cc: Jeffrey A. Letalien, Esq.