

July 6, 2023

Ms. Jessica Ansart
Office of Industrial Applications and Services
Division of Corporation Finance
U.S. Securities and Exchange Commission
100 F Street NE
Washington, DC 20549

**Re: MedTech Acquisition Corp
Amendment No. 4 to Registration Statement on Form S-4
Filed June 8, 2023
File No. 333-269138**

Dear Ms. Ansart:

On behalf of our client, MedTech Acquisition Corporation (the "Company" or "MTAC"), set forth below are the responses of the Company to the comments of the Staff (the "Staff") of the Securities and Exchange Commission set forth in the Staff's letter, dated June 20, 2023, with respect to the above-referenced filing. The numbered items set forth below repeat (in bold italics) the comments of the Staff reflected in the comment letter, and following such comments are the responses of the Company (in regular type). Concurrently herewith, the Company is filing Amendment No. 5 to the Registration Statement on Form S-4 (the "Amended Registration Statement") that reflects the responses to your comments. In addition, we are delivering to the Staff clean and marked courtesy copies of the Amended Registration Statement. Capitalized terms used but not defined in this letter have the meanings given to such terms in the Amended Registration Statement. References to page numbers in this letter are to page numbers in the Amended Registration Statement.

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

Ownership of the Combined Company After the Closing, page 33

- We note your disclosure on pages 30-31 that your Sponsor and certain of its affiliates will be participating in the PIPE, including pursuant to the Backstop Letter Agreement. Please revise your discussion here and your table on page 34 to disclose the Sponsor and its affiliates' total potential ownership interest in the combined company, assuming exercise and conversion of all securities, including the Series A Convertible Preferred Stock they may receive pursuant to the PIPE and Backstop Letter Agreement.***

Response:

In response to the Staff's comment, the Company respectfully advises the Staff that the Backstop Letter Agreement was terminated on July 4, 2023 as disclosed on pages 31-32, 154, and 376 of the Amended Registration Statement. Accordingly, the Sponsor no longer has any ongoing obligations under the Backstop Letter Agreement, nor has the Sponsor otherwise subscribed for shares of Series A Convertible Preferred Stock in the Preferred Stock PIPE Investment. However, the Company has revised the disclosure on pages 15, 35, 41-42, 116-117, 180-181, 185, and 375 of the Amended Registration Statement to clarify the portion of the Preferred Stock PIPE Investment that is represented by members, or affiliates of members, of the Sponsor.

AUSTIN	DETROIT	MEXICO CITY	SACRAMENTO	TALLAHASSEE
BOSTON	HOUSTON	MIAMI	SALT LAKE CITY	TAMPA
CHICAGO	JACKSONVILLE	MILWAUKEE	SAN DIEGO	WASHINGTON, D.C.
DALLAS	LOS ANGELES	NEW YORK	SAN FRANCISCO	BRUSSELS
DENVER	MADISON	ORLANDO	SILICON VALLEY	TOKYO

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Description of MTAC's Securities
Series A Convertible Preferred Stock
Anti-dilution Provisions, page 327

2. ***Please state whether the Sponsor and its affiliates may receive additional securities pursuant to an anti-dilution adjustment based on the company's additional financing activities with respect to the PIPE. If so, please quantify the number and value of securities the sponsor and its affiliates will receive. In addition, disclose the ownership percentages in the company before and after the additional financing to highlight dilution to public stockholders.***

Response:

In response to the Staff's comment, the Company has revised the disclosure on page 320 of the Amended Registration Statement.

Exhibits

3. ***To the extent you have a placement agent or other agreement with Ceros Financial Services, Inc. please file it as an exhibit.***

Response:

In response to the Staff's comment, the Company has filed the Engagement Letter with Ceros Financial Services, Inc. and Amendment No. 1 to the Engagement Letter as Exhibit 10.27 and Exhibit 10.28 to the Amended Registration Statement, respectively.

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If the Staff has any questions with respect to any of the foregoing, please contact the undersigned at (813) 225-5441.

Very truly yours,

/s/ Kevin M. Shuler, Esq.

Kevin M. Shuler, Esq.
Foley & Lardner LLP

cc: Christopher Dewey, MedTech Acquisition Corporation
Robert Weiss, MedTech Acquisition Corporation