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United States Securities and Exchange Commission
Division of Corporation Finance
Office of Beverages, Apparel and Mining
Washington, D.C. 20549
Attention: Craig Arakawa
Linda Cvrkel
Pam Howell
Michael Killoy

Re: Constellation Alpha Capital Corp.
Registration Statement on Form S-4
Filed June 18, 2019
SEC Comment Letter dated July 12, 2019
File No. 333-232181

Ladies and Gentlemen:

This letter is submitted on behalf of Constellation Alpha Capital Corp. (the “Company”), in response to the comments of the staff of the Office of Beverages, Apparel and Mining (the “Staff”) of the Securities and Exchange Commission (the “Commission”) with respect to the Company’s Registration Statement on Form S-4 filed with the Commission on June 18, 2019 (the “Registration Statement”), as set forth in the Staff’s letter to Mr. Rajiv Shukla of the Company dated July 12, 2019 (the “Comment Letter”). The Company is concurrently submitting Amendment No. 1 to the Registration Statement (“Amendment No. 1”) which includes changes in response to the Staff’s comments.

For reference purposes, the text of the Comment Letter has been reproduced and italicized herein with the Company’s responses below each numbered comment. Unless otherwise indicated, page references in the descriptions of the Staff’s comments refer to the Registration Statement, and page references in the Company’s responses refer to Amendment No. 1. All capitalized terms used and not otherwise defined herein shall have the meanings set forth in the Registration Statement.

Registration Statement on Form S-4

Cover Page

1. *We note the registration table includes registration of the common stock to be issued to equity holders of the Constellation equity holders in the domestication transaction. Please revise the prospectus cover page to include a discussion of all shares being offered pursuant to this registration statement. See Item 501(b)(2) of Regulation S-K.*

Response:

The Company has added disclosure on the prospectus cover page included in Amendment No. 1 to include a discussion of all shares being offered pursuant to the Registration Statement.

Selected Historical Financial Data of Constellation, page 30

2. *Please update this information to include income statement and balance sheet data for the fiscal year ended March 31, 2019. We also note you disclose that the information for the period from July 31, 2015 (inception) to March 31, 2016 and for the year ended March 31, 2016 is derived from audited financial statements included elsewhere in the filing, however these financial statements do not appear to be included. Please revise to eliminate this inconsistency.*

Response:

The Company has revised the disclosure on page 30 of Amendment No. 1 to include income statement and balance sheet data for the Company. In addition, the Company has removed the reference to the information for the period from July 31, 2015 (inception) to March 31, 2016 and for the year ended March 31, 2016 being included elsewhere in the Registration Statement.

Comparative Historical and Unaudited Pro Forma Earnings and Book Value Per Share Data, page 31

3. *We note that your calculation of DermTech's historical book value per share as of March 31, 2019 and December 31, 2018 assumes conversion of DermTech's preferred shares. Please tell us how your calculation is consistent with your presentation of DermTech's historical net loss per share and in compliance with Item 3(f)(1) of Form S-4.*

Response:

The Company has revised the disclosure on page 31 of Amendment No. 1 to (i) clarify that the calculation of DermTech's historical book value per share as of March 31, 2019 and December 31, 2018 excludes the conversion of DermTech's preferred shares and convertible promissory notes, and to (ii) adjust the corresponding historical book value figure based on this calculation. The Company believes the revised calculation of DermTech's historical book value per share as of March 31, 2019 and December 31, 2018 is now consistent with its presentation of DermTech's historical net loss per share and is in compliance with Item 3(f)(1) of Form S-4.

The Business Combination

Background of the Business Combination, page 95

4. *Please disclose whether DermTech was a company that received one of the initial non-binding letters of intent. If not, please disclose how the negotiations with DermTech commenced.*

Response:

The Company has revised the disclosure on page 96 of Amendment No. 1 to disclose how the negotiations with DermTech commenced.

5. *We note the disclosure that you entered into a share purchase agreement with Medall Healthcare Private Limited on August 2, 2018 which terminated automatically on December 3, 2018. Please further describe why the agreement with Medall was not consummated.*

Response:

The Company has revised the disclosure on page 96 of Amendment No. 1 to further describe the why the agreement with Medall was not consummated.

6. *Please describe the revised valuation and cash condition to closing that was discussed in the February 13, 2019 between Dr. Dobak and Constellation. Also, please further describe the discussions between February 13, 2019 and March 5, 2019 regarding the new capital and valuation structure. Additionally, please describe the agreement reached between March 9, 2019 and March 13, 2019.*

Response:

The Company has revised the disclosure on page 97 of Amendment No. 1 to describe the revised valuation and cash condition that was discussed in the February 13, 2019 meeting between Dr. Dobak and the Company. The Company has revised the disclosure on page 97 of Amendment No. 1 to (i) describe the discussions among the parties between February 13, 2019 and March 5, 2019 regarding the new capital and valuation structure and (ii) to clarify that the agreement reached on March 9, 2019 is the same agreement referenced on March 13, 2019.

7. *Please discuss in greater detail the role of Cowen and Company in the negotiations of the business combination. Please also disclose the relationship of Cowen to Constellation.*

Response:

In response to the Staff's comment, the Company has revised the disclosure on page 97 of Amendment No. 1.

Material U.S. Federal Income Tax Consequences of the Business Combination, page 106

8. *Please revise this section to clearly state that the disclosure in the tax consequences section is the opinion of the named counsel and clearly articulate the opinion of counsel. For guidance, see Staff Legal Bulletin No. 19.II.B.*

Response:

In response to the Staff's comment, the Company has revised the disclosure on pages 106, 107 and 108 of Amendment No. 1.

Lock-Up Agreement, page 129

9. *Please clarify the certain shareholders that will be subject to the lock-up agreement.*

Response:

The Company has revised the disclosure on page 130 of Amendment No. 1 to disclose the shareholders of DermTech that will be subject to the lock-up agreement.

Material U.S. Federal Income Tax Consequences of the Domestication, page 134

10. *Please revise this section to clearly state that the disclosure in the tax consequences section is the opinion of the named counsel and clearly articulate the opinion of counsel. For guidance, see Staff Legal Bulletin No. 19.II.B. In addition, we note the statement that US shareholders "should not" recognize taxable gain or loss as a result of the domestication. Please explain why you cannot give a "will" opinion and describe the degree of uncertainty. For guidance, see Staff Legal Bulletin No. 19.II.C.4.*

Response:

In response to the Staff's comment, the Company has revised the disclosure on page 135 of Amendment No. 1.

DermTech Business, page 157

11. *Please disclose the total number of employees, in addition to the number of full time employees, as required by Item 101(h)(4)(xii) of Regulation S-K.*

Response:

The Company has revised the disclosure on page 182 of Amendment No. 1 to disclose DermTech's total number of employees in addition to the number of full-time employees of DermTech.

12. *We note that contract research accounts for more than half of your revenues. Please provide a discussion of this part of your business, as required by Item 101(h)(4)(i) of Regulation S-K.*

Response:

In response to the Staff's comment, the Company has revised the disclosure on page 159 of Amendment No. 1 and we respectfully refer the Staff to the disclosure regarding DermTech's contract research accounts on page 161 of the Registration Statement.

DermTech Management's Discussion and Analysis of Financial Condition and Results of Operations, page 194

13. *The Management's Discussion and Analysis section is one of the most critical aspects of your disclosure. As such, we request that you revise this section to provide a more detailed executive overview to discuss the events, trends, and uncertainties that management views as most critical to your future revenues, financial position, liquidity, plan of operations, and results of operations, to the extent known and foreseeable. To assist you in this regard, please refer to the Commission Guidance Regarding Management's Discussion and Analysis of Financial Condition and Results of Operations, Release Nos. 33-8350 (December 19, 2003) at <http://www.sec.gov/rules/interp/33-8350.htm>.*

Response:

The Company has revised the disclosure on pages 196, 199, 203 and 204 of Amendment No. 1 to provide a more detailed executive overview of the Management's Discussion and Analysis section.

Management Following the Business Combination, page 211

14. *Please disclose for each director, the specific experience, qualifications, attributes or skills that led to the conclusion that the person should serve as a director of the company in light of the company's business and structure. See Item 401(e)(1) of Regulation S-K.*

Response:

The Company has revised the disclosure on pages 213 through 216 of Amendment No. 1 to disclose for each director, the specific experience, qualifications, attributes or skills that led to the conclusion that the person should serve as a director of the combined company in light of the combined company's business and structure.

Employment Arrangements and Potential Payments Upon Termination of Employment or Change in Control, page 220

15. *We note that this transaction is considered a change in control for purposes of various option and RSU agreements. Please revise the discussion in this section and the interests of officers, directors and affiliates of DermTech to discuss in greater detail and quantify to the extent practicable, the value of the immediate vesting of these securities.*

Response:

The Company has revised the disclosure on pages 102, 103, 220, 221 and 222 of Amendment No. 1 to discuss in greater detail the vesting of various DermTech option and RSU agreements. The Company has not quantified the value of the immediate vesting of these securities because it would not be practicable to do so. Although the Company's ordinary shares have traded on the Nasdaq Capital Market between \$10.37 and \$10.40 over the past five business days, the Company expects the trading value of such shares to be substantially lower upon the closing of the business combination because \$20 million of Constellation common stock has been subscribed for, at a price per share of \$3.25, by investors in the PIPE financing that is expected to close concurrently with the closing of the business combination. Given the foregoing, the Company believes any attempt to quantify the value of the immediate vesting of certain DermTech options and RSU agreements could be misleading to investors.

DermTech Director Compensation, page 221

16. *Please revise to include the \$30,000 paid to a director for consulting services, as referenced in footnote 8 to the financial statements. See Item 402(r)(2)(vii)(F) of Regulation S-K.*

Response:

The Company has revised the disclosure on page 223 of Amendment No. 1 to include the \$30,000 paid to Mr. Matt Posard, a director of DermTech, for consulting services, as referenced in footnote 8 to DermTech's financial statements.

Unaudited Pro Forma Condensed Combined Financial Information
Description of the Business Combination, page 224

17. *Please revise the introductory paragraph to the pro forma financial information to disclose the planned accounting treatment for the merger transaction and the basis or rationale for this planned accounting treatment pursuant to the guidance in ASC 805.*

Response:

The Company has revised the disclosure on page 226 of Amendment No. 1 to disclose the planned accounting treatment for the business combination and the basis for such treatment pursuant to the guidance in ASC 805.

Pro Forma Adjustments to the Unaudited Condensed Combined Balance Sheet, page 227

18. *You state in footnote 2 that this adjustment assumes that the maximum number of shares of 1,187,532 are redeemed into cash by the Constellation shareholders at a price of \$10.41. Given that less than the maximum number of shares may be redeemed in connection with the merger transaction, please tell us how you considered providing a sensitivity analysis explaining how the pro forma balance sheet will be impacted in the event that less than the maximum number of shares are redeemed.*

Response:

The Company has revised the disclosure on page 229 of Amendment No. 1 to include a sensitivity analysis in footnote 2 explaining how the pro forma balance sheet will be impacted in the event that less than the maximum number of public shares are redeemed.

19. *You indicate in footnote 8 that this adjustment reflects the conversion of DermTech outstanding common stock into the combined entity's common stock and assumes that 9,928,285 shares of DermTech common stock will be converted into 12,729,061 shares of Constellation common stock at a conversion ratio of 1.28. Please disclose how you arrived at the 12,729,061 shares to be issued in the business combination and tell us why the conversion ratio presented here differs from the 1.16 ratio disclosed at page 21 of the prospectus summary. Your disclosure in footnote 4 on page 229 should be similarly revised.*

Response:

The conversion ratio of 1.28 set forth in footnote 8 assumes the business combination was completed on March 31, 2019, and is calculated in accordance with the terms of the Merger Agreement, as described on page 106 of Amendment No. 1 under the heading "Merger Consideration." The conversion ratio is equal to the quotient of 16,000,000 divided by the sum of the number of shares of outstanding DermTech capital stock (including any shares to be issued pursuant to promissory notes converting immediately prior to the closing of the business combination) plus the number of shares underlying outstanding DermTech stock options, restricted stock units and warrants having an exercise price per share of less than \$3.80 (such quotient, the "Total DermTech Shares").

Assuming a March 31, 2019 closing, 16,000,000 divided by 12,479,519 Total DermTech Shares equals a conversion ratio of 1.28. The Company has revised the disclosure on page 230 of Amendment No. 1 to include an explanation of the foregoing in footnote 8.

The lower conversion ratio of 1.16 disclosed in the prospectus summary assumes the business combination is completed on August 28, 2019, and it includes additional dilution generated from the conversion of \$2.6 million worth of additional convertible promissory notes DermTech issued in June 2019. The Company has revised the disclosure on page 232 of Amendment No. 1 to include an explanation of the foregoing in footnote 4.

Unaudited Pro Forma Condensed Consolidated Statement of Operations and Comprehensive Loss, page 228

20. *Footnote 4 indicates that you have assumed that the maximum number of shares subject to redemption will be redeemed in connection with the merger. Please tell us how you considered providing a sensitivity analysis explaining how weighted average shares outstanding and your resultant earnings per share will be impacted in the event that less than the maximum number of shares are redeemed in connection with the offering.*

Response:

The Company has revised the disclosure on page 232 of Amendment No. 1 to include a sensitivity analysis in footnote 4 explaining how weighted average shares outstanding and the resulting earnings per share will be impacted in the event that less than the maximum number of shares are redeemed in connection with the offering.

21. *The disclosure on page 129 under the heading “Forfeiture Agreement” indicates that Constellation’s sponsor entered into a forfeiture agreement under which the sponsor has agreed to forfeit to Constellation an aggregate 2,694,779 shares of Constellation common stock immediately prior to consummation of the business combination. Please explain why an adjustment for the forfeiture of these shares has not been reflected in the computation of the weighted average shares, basic and diluted, to be outstanding after completion of the merger as disclosed on page 229.*

Response:

The Company has revised the disclosure on page 232 of Amendment No. 1 to include an adjustment for the forfeiture of the shares subject to the forfeiture agreement in the computation of the weighted average shares, basic and diluted, to be outstanding after completion of the merger.

Rights, page 243

22. *Your disclosure on page 243 indicates that there are currently 14,936,250 rights to receive ordinary shares issued and outstanding and that each holder of a right will receive one-tenth of one ordinary share upon consummation of Constellation's initial business combination. Please explain why the shares that will be issued for these rights upon consummation of the DermTech merger have not been reflected in adjustments to the pro forma financial information included on pages 224 through 229 of the registration statement.*

Response:

The Company has revised the disclosure on pages 227 through 232 of Amendment No. 1 to include the shares that will be issued for the rights in the pro forma financial information.

Principal Stockholders of DermTech, page 250

23. *Please disclose the control person(s) for Paulson Investment Company LLC and RTW Investments L.P.*

Response:

The Company has revised the disclosure on page 254 of Amendment No. 1 to disclose the control persons for Paulson Investment Company LLC and RTW Investments L.P.

Report of Independent Registered Public Accounting Firm, page F-2

24. *Please revise to obtain a report of the independent registered public accounting firm which indicates that their audits were conducted in accordance with standards of the PCAOB rather than just the auditing standards of the PCAOB. Refer to the guidance in paragraph .09 of AS3101.*

Response:

In response to the Staff's comment, the report of KPMG has been revised on page F-2 of Amendment No. 1.

Constellation Alpha Capital Corp. Financial Statements

Notes to Financial Statements

Reconciliation of net loss per ordinary share, page F-58

25. *In the reconciliation of net loss per ordinary share, you reflect an adjustment for the income attributable to ordinary shares subject to redemption. Please revise to explain in further detail how you calculated or determined the amount of this adjustment for each period presented.*

Response:

Income attributable to shares subject to redemption is calculated as income from trust assets (interest and unrealized gains or losses less applicable current income tax expense) multiplied by a fraction, the numerator of which is the number of shares subject to redemption and the denominator of which is the total number of public shares. The Company has revised the disclosure on page F-59 of Amendment No. 1 to add in tabular form the reconciliation of the amount of the adjustment for each period presented.

Exhibits, page II-3

26. *Please file executed Exhibits 10.24, and 10.29. In addition, please file Exhibit A to Exhibit 10.24.*

Response:

In response to the Staff's comment, the Company has filed with Amendment No. 1 executed versions of Exhibits 10.24 and 10.29 (which was originally filed as a form of agreement in the Registration Statement and is now included as Exhibits 10.29 through 10.40 in Amendment No. 1) as well as Exhibit A to Exhibit 10.24.

27. *Please file the convertible bridge notes and the amendment to these notes, as referenced on page 195.*

Response:

In response to the Staff's comment, the Company has filed with Amendment No. 1 the convertible bridge notes and the amendment to these notes, as referenced on page 197 of the Registration Statement, as Exhibits 10.41 through 10.59.

* * *

Please do not hesitate to call me at (212) 801-6926 should you have any questions regarding Amendment No. 1 or the above responses.

Sincerely yours,

/s/ Joseph A. Herz

Joseph A. Herz

cc: Rajiv Shukla
Craig Pollak
Mr. Steven Kemper
Jeremy Glaser, Esq.