GOODWIN

Goodwin Procter LLP
100 Northern Avenue
Boston, MA 02210

goodwinlaw.com
+1 617 570 1000

July 31, 2020

Mr. Courtney Lindsay
Ms. Mary Beth Breslin
Office of Life Sciences
Division of Corporation Finance
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: Compass Therapeutics, Inc.
Current Report on Form 8-K
Filed June 23, 2020
File No. 000-55939

Dear Mr. Lindsay and Ms. Breslin:

This letter is submitted on behalf of Compass Therapeutics, Inc. (the "**Company**") in response to comments of the staff of the Division of Corporation Finance (the "**Staff**") of the U.S. Securities and Exchange Commission (the "**Commission**") with respect to the Company's Current Report on Form 8-K filed on June 23, 2020 (the "**Current Report**"), as set forth in the Staff's letter dated July 16, 2020 to Thomas J. Schuetz, M.D., Ph.D., Chief Executive Officer (the "**Comment Letter**"). The Company is concurrently filing an amended Current Report on Form 8-K (the "**Amendment**"), which includes changes to reflect responses to the Staff's comments and other updates.

For reference purposes, the text of the Comment Letter has been reproduced and italicized herein with responses below each numbered comment. Unless otherwise indicated, page references in the descriptions of the Staff's comments refer to the Current Report, and page references in the responses refer to the Amendment. All capitalized terms used and not otherwise defined herein shall have the meanings set forth in the Amendment.

Form 8-K filed June 23, 2020

Description of Business, page 9

1. Throughout this section, please remove all statements that reference efficacy and safety, including synonyms and similar terms (e.g., "robust" and "potent cytotoxic activity"), as safety and efficacy determinations are solely within the authority of the Food and Drug Administration or other regulatory agencies.

Response to Comment No. 1. The Company respectfully advises the Staff that it has revised the disclosure on pages 2, 3, 4, 5, 6, 10, 11, 14, 15, 17, 18, 20 and 21 of the Amendment in response to the Staff's comment in order to remove references that indicate a safety or efficacy determination with respect to the Company's product candidates.

Overview, page 9

2. We note that you state that you "plan to rapidly advance [your] product candidates through clinical development." Please revise your disclosure here and throughout your filing to remove any implication that you will be successful in commercializing your product candidates in a rapid or accelerated manner, as such statements are speculative.

Response to Comment No. 2. The Company respectfully advises the Staff that it has revised the disclosure on pages 2, 4, 24 and 88 of the Amendment in response to the Staff's comment in order to remove statements that imply the successful commercialization of the Company's product candidates in a rapid or accelerated manner.

Pipeline, page 11

3. Please revise the chart on page 11 to clarify the term "TAA" and provide a brief narrative below of what this line in the chart is depicting. Please also include the specific indication(s) for which your product candidates are being developed.

Response to Comment No. 3. The Company respectfully advises the Staff that it has revised the disclosure on page 4 of the Amendment in response to the Staff's comment.

Figure 1. We have assembled a panel of proprietary antibodies against a broad panel of key immune targets, page 13

4. Please provide a brief narrative of what your graphic is depicting.

Response to Comment No. 4. The Company respectfully advises the Staff that it has revised the disclosure on page 6 of the Amendment in response to the Staff's comment.

Phase 1 clinical trial data as of May 24, 2020, page 20

5. We note your disclosure that the ongoing Phase 1 trial of CTX-471 was designed to evaluate the safety and tolerability of your product candidate, but it appears that you are presenting efficacy data from this trial on page 21. Please revise to remove the statements regarding efficacy if it is not being measured in the current trial, or revise to clarify the current trial phase and disclose the efficacy endpoints of the trial.

Response to Comment No. 5. The Company respectfully advises the Staff that it has revised the disclosure on pages 12 and 13 of the Amendment in response to the Staff's comment. The Company supplementally advises the Staff that while the primary objective of the ongoing Phase 1 clinical trial of CTX-471 is to evaluate safety and tolerability, the Company is also collecting efficacy data, including to inform its future development plans for this product candidate.

License Agreement, page 29

6. Please disclose that you have additional milestone payments due under your collaboration agreement and quantify the aggregate potential milestone payments due.

Response to Comment No. 6. The Company supplementally advises the Staff that the total aggregate milestone payments that may be made under this license agreement amount to $3.5 million. The Company respectfully advises the Staff that it has revised the disclosure on page 22 of the Amendment in response to the Staff's comment to clarify that such dollar figure represents the total aggregate milestone payments that may be due under the agreement, of which $1.5 million has been previously paid and an additional $2.0 million may be payable in the future.

Management's Discussion and Analysis of Financial Condition and Results of Operation Overview, page 99

7. We note you will need substantial additional funding to support your continuing operations and pursue your growth strategy. Please disclose how far in the development of your product candidates you expect to reach with your current capital resources.

Response to Comment No. 7. The Company respectfully advises the Staff that it has revised the disclosure on page 99 of the Amendment in response to the Staff's comment.

Results of Operations, page 104

8. We note that you have multiple products in varying stages of development and clinical testing. Please revise to disclose more detail for your research and development expenses each period presented, including but not limited to by product candidate and the nature of the expenses.

Response to Comment No. 8. The Company respectfully advises the Staff that it has revised the disclosure on page 95 of the Amendment in response to the Staff's comment.

* * * * *

Should you have any further comments or questions with regard to the foregoing, please contact the undersigned at (617) 570-1483.

Sincerely,

/s/ James Xu, Esq.

Enclosures

cc: Thomas J. Schuetz, M.D., Ph.D., Chief Executive Officer, *Compass Therapeutics, Inc.*
Vered Bisker-Lieb, Ph.D., MBA, Chief Operating Officer, *Compass Therapeutics, Inc.*
Sarah Ashfaq, Esq., *Goodwin Procter LLP*