Goodwin Procter
100 Northern Avenue
Boston, Massachusetts 02210
goodwinlaw.com
+1 617 570 1000

May 17, 2024

Division of Corporation Finance
Office of Life Sciences
United States Securities and Exchange Commission
100 F Street, NE
Washington, D.C. 20549
Attention: Tamika Sheppard, Joe McCann, Daniel Gordon and Jenn Do

Re: Rapport Therapeutics, Inc.
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted April 29, 2024
CIK No. 0002012593

Dear Ladies and Gentlemen:

This letter is confidentially submitted on behalf of Rapport Therapeutics, Inc. (the "**Company**") in response to the comments of the staff of the Division of Corporation Finance (the "**Staff**") of the Securities and Exchange Commission with respect to the Company's Draft Registration Statement on Form S-1 originally confidentially submitted on March 27, 2024 and resubmitted on April 29, 2024 (the "**Draft Registration Statement**"), as set forth in your letter dated May 13, 2024 addressed to Troy Ignelzi, Chief Financial Officer of the Company (the "**Comment Letter**"). The Company is concurrently publicly filing the Registration Statement on Form S-1 (the "**Registration Statement**"), which includes changes that reflect responses to the Staff's comments and other updates.

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

The responses provided herein are based upon information provided to Goodwin Procter LLP by the Company.

Introduction to RAP-219, page 4

1. *We note your revised disclosure on page 5 and elsewhere in response to prior comment 1. With reference to the second full sentence on page 5, and with a view to clarified disclosure, please tell us whether there is preclinical data demonstrating that RAP-219 has minimal or no expression in the cerebellum, brainstem and other brain areas that are critical for normal brain functions. In this regard, we note that the preclinical study presented on page 121 appears to have been conducted using a molecule that is not RAP-219.*

   RESPONSE: The Company respectfully acknowledges the Staff's comment and advises the Staff that it has revised the disclosure on pages 5 and 119. The Company respectfully directs the Staff to the preclinical study discussed on pages 126-128 detailing the relevant preclinical studies. As disclosed, preclinical studies have demonstrated that (i) TARPg8 expression is enriched in the hippocampus, amygdala, cerebral cortex and striatum and TARPg8 has minimal or no expression in certain other areas that are critical for normal brain functions, including the cerebellum and brainstem; and (ii) RAP-219 and other TARPg8 NAMs selectively bind in a similar mode to a pocket between GluA and TARPg8. As TARPg8 has minimal or no expression in the cerebellum, brainstem and certain other brain areas critical for normal brain functions, TARPg8 NAMs, including RAP-219, do not bind to AMPARs in these brain regions. With respect to the last sentence of the Staff's comment 1, the Company respectfully directs the Staff to its response to comment 2 below and related revisions on pages 126-128 regarding use of molecules other than RAP-219 in preclinical studies.

RAP-219 Preclinical Studies, page 121

2. *We note your revised disclosure in response to prior comment 7. Please revise to explain whether these other TARPy8 NAMS are third-party molecules or proprietary ones and why preclinical testing was conducted on these molecules and not on RAP-219. To the extent that any of the preclinical data presented relates to RAP-482, please identify the preclinical study and revise the disclosure on page 19 to discuss the reason(s) why RAP-482 received a full clinical hold from the FDA.*

   RESPONSE: The Company respectfully acknowledges the Staff's comment and advises the Staff that it has revised the disclosure on pages 126-128. The Company respectfully directs the Staff to the disclosure on page 127, identifying third-party structural analyses that have indicated that all TARPg8 AMPAR NAMs bind in a similar mode. The shared binding site and similar observed pharmacological effects lead the Company to believe that preclinical generated data using these earlier generation TARPg8 NAMs and third-party published data generated using other TARPg8 NAMs are also supportive of RAP-219. The Company believes that it is an accepted scientific practice to reference preclinical data generated using other molecules of the same class. For example, the Company continued to conduct preclinical research using RTX-1738, a TARPg8 NAM licensed to the Company from Janssen under the same patent as RAP-219, once RAP-219 was advanced into the clinic because companies typically stop preclinical research with clinical-stage molecules. The preclinical data described in the Registration Statement generated with TARPg8 NAMs of the same class as RAP-219 has informed the Company's continued advancement of RAP-219, and the Company believes these data are important for an investor's understanding of the product candidate. In consideration of the Staff's comment, the Company further advises the Staff that it has added language in the Risk Factors disclosure on page 29 to address the potential risk of relying on earlier generation and third-party TARPy8 NAMs. In addition, the Company confirms that none of the preclinical data presented in the Registration Statement used RAP-482.

[Signature Page Follows]

If you should have any questions concerning the enclosed matters, please contact the undersigned at (617) 570-1222.

Sincerely,

/s/ Kingsley L. Taft
Kingsley L. Taft, Esq.

cc: Abraham N. Ceesay, *Rapport Therapeutics, Inc.*
Troy Ignelzi, *Rapport Therapeutics, Inc.*
Stephanie A. Richards, *Goodwin Procter LLP*
Justin S. Platt, *Goodwin Procter LLP*
Richard Segal, *Cooley LLP*
Divakar Gupta, *Cooley LLP*
Darah Protas, *Cooley LLP*