

VIA EDGAR

February 9, 2024

United States Securities and Exchange Commission
Division of Corporation Finance
Office of Life Sciences
100 F Street, N.E.
Washington, D.C. 20549-3628
Attention: Doris Stacey Gama, Jason Drory, Eric Atallah and Lynn Dicker

**Re: Graphite Bio, Inc.
Amendment No. 2 to Registration Statement on Form S-4
Filed February 5, 2023
File No. 333-275919**

Ladies and Gentlemen,

On behalf of Graphite Bio, Inc. (the "Company"), we are submitting this letter to the Securities and Exchange Commission (the "SEC") via EDGAR in response to the comment letter from the staff of the SEC (the "Staff"), dated February 9, 2024 (the "Comment Letter"), pertaining to the Company's above-referenced Registration Statement on Form S-4 (the "Registration Statement"). In connection with such responses, the Company is concurrently filing Amendment No. 3 to the Registration Statement (the "Amended Registration Statement").

For your convenience, the Staff's comments are summarized in this letter, and each comment is followed by the applicable responses on behalf of the Company. Unless otherwise indicated, page references in the responses correspond to the page numbers in the Amended Registration Statement. Capitalized terms used in this letter but otherwise not defined herein shall have the meanings set forth in the Amended Registration Statement.

Amendment No. 2 to Registration Statement on Form S-4 filed February 5, 2024**Litigation Related to the Merger, page 23****1. Please provide the disclosures required by Item 103 of Regulation S-K, including, for example only, the relief sought.**

Response: The Company respectfully acknowledges the Staff's comment and advises the Staff that it has revised the disclosure on pages 31 and 310 of the Amended Registration Statement in response to the Staff's comment.

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Please contact the undersigned at (617) 570-1861 or via email at agoodman@goodwinlaw.com if you have any questions with respect to the foregoing.

Very truly yours,

/s/ Andrew H. Goodman
Andrew H. Goodman
Goodwin Procter LLP

cc: Kimberlee C. Drapkin, *Graphite Bio, Inc.*
Maggie L. Wong, *Goodwin Procter LLP*
Shoaib Ghias, *Goodwin Procter LLP*
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