

Graphite Bio, Inc.
201 Haskins Way, Suite 210
South San Francisco, CA 94080

July 26, 2022

Via EDGAR Transmission

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

Re: Graphite Bio, Inc.: Registration Statement on FormS-3 filed July 21, 2022 (File No. 333-266262)

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended (the “**Act**”), Graphite Bio, Inc. (the “**Company**”) hereby requests that the effective date of the above-referenced registration statement (the “**Registration Statement**”) be accelerated to July 28, 2022, at 4:00 pm Eastern Time, or as soon thereafter as practicable, unless we or our outside counsel, Goodwin Procter LLP, request by telephone that such Registration Statement be declared effective at some other time. In making this acceleration request, the Company acknowledges that it is aware of its responsibilities under the Act.

If you have any questions regarding this request, please contact Maggie Wong of Goodwin Procter LLP at (415) 733-6071.

Sincerely,
Graphite Bio, Inc.

/s/ Alethia Young
Alethia Young
Chief Financial Officer

cc: Josh Lehrer, *Graphite Bio, Inc.*
Mitchell Bloom, *Goodwin Procter LLP*
Maggie Wong, *Goodwin Procter LLP*
Shoaib Ghias, *Goodwin Procter LLP*