June 22, 2021

Office of Life Sciences
Division of Corporation Finance
United States Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549
Attention: Jane Park

Jeffrey Gabor Kristin Lochhead Daniel Gordon

Re: Graphite Bio, Inc.

Registration Statement on Form S-1 (File No. 333-256838)

Ladies and Gentlemen:

Pursuant to Rule 460 of the General Rules and Regulations under the Securities Act of 1933, as amended, we wish to advise that between June 22, 2021 and the date hereof, approximately 1,460 copies of the Preliminary Prospectus dated June 22, 2021 were distributed to prospective underwriters, institutional investors and prospective dealers in connection with the above-captioned Registration Statement.

We wish to advise you that the participating underwriters have informed us that they have complied and will continue to comply with the requirements of Rule 15c2-8 under the Securities Exchange Act of 1934, as amended.

We hereby join in the request of the registrant that the effectiveness of the above-captioned Registration Statement, as amended, be accelerated to 4:00 p.m. Eastern Time, on Thursday, June 24, 2021 or as soon thereafter as practicable.

[Signature page follows]

Very truly yours,

MORGAN STANLEY & CO. LLC BOFA SECURITIES, INC. COWEN AND COMPANY, LLC SVB LEERINK LLC

As representatives of the Underwriters

By: Morgan Stanley & Co. LLC

By: /s/ Chirag D. Surti

Name: Chirag D. Surti Title: Vice President

By: BofA Securities, Inc.

By: /s/ Michael Liloia

Name: Michael Liloia Title: Director

By: Cowen and Company, LLC

By: /s/ Bill Follis

Name: Bill Follis Title: Managing Director

By: SVB Leerink LLC

By: /s/ Stuart Nayman

Name: Stuart Nayman

Title: Managing Director, Senior Legal Counsel

[Graphite Bio - Underwriter Acceleration Request Signature Page]