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INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934
or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person * <u>EcoR1 Capital, LLC</u> (Last) (First) (Middle) <u>357 TEHAMA STREET #3</u> (Street) <u>SAN FRANCISCO CA 94103</u> (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) <u>01/06/2023</u>	3. Issuer Name and Ticker or Trading Symbol <u>Graphite Bio, Inc. [GRPH]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
<u>Common Stock</u>	<u>8,538,446</u>	<u>I</u>	<u>See Notes 1 and 2⁽¹⁾⁽²⁾</u>

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			

Explanation of Responses:

1. The filing persons (the "Filers") are EcoR1 Capital, LLC ("EcoR1"), Oleg Nodelman and EcoR1 Capital Fund Qualified, L.P. ("Qualified Fund"). EcoR1 is the general partner and investment adviser of private funds, including Qualified Fund (collectively, the "Funds"). Mr. Nodelman is the manager and controlling owner of EcoR1. EcoR1 is filing this Form 3 for itself, Mr. Nodelman and Qualified Fund. The Filers are filing this Form 3 jointly, but not as a group, and each expressly disclaims membership in a group, within the meaning of Rule 13d-5(b) under the Securities Exchange Act of 1934, as amended. The Funds hold these securities directly for the benefit of their investors. EcoR1 indirectly beneficially owns them as the investment adviser to the Funds, and Mr. Nodelman indirectly beneficially owns them as the control person of EcoR1. The Filers disclaim beneficial ownership of such securities except to the extent of their respective pecuniary interests therein.

2. Qualified Fund directly holds 8,039,801 of the shares of Common Stock reported in this Form 3.

Oleg Nodelman, Manager of
EcoR1 Capital, LLC

01/06/2023

** Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 5 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.