FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPROVAL             |     |  |  |  |  |  |  |  |  |
|--------------------------|-----|--|--|--|--|--|--|--|--|
| OMB Number: 3235-028     |     |  |  |  |  |  |  |  |  |
| Estimated average burden |     |  |  |  |  |  |  |  |  |
| hours per response:      | 0.5 |  |  |  |  |  |  |  |  |

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940 Instruction 1(b)

|  |  |  |   |         | _  |   |            |                                     |  |  |                    |   |                                   |  |   |   |   |  |   |
|--|--|--|---|---------|--|---|------------|-------------------------------------|--|--|--------------------|---|-----------------------------------|--|---|---|---|--|---|
| Name and Address of Reporting Person*     Glucksmann Alexandra |  |  |   |         | 2. Issuer Name and Ticker or Trading Symbol REGENXBIO Inc. [ RGNX ]  |   |            |                                     |  |  |                    |   |                                   | k all applic                             | cable)  | Pers  | son(s) to Iss                                       |  |   |
| (Last)   | (F   | irst)                                      | (Middle)  |         |  | 3. Date of Earliest Transaction (Month/Day/Year) 05/31/2024 |            |                                     |  |  |                    |   |                                   |  |   | Officer (give title below)  |   | Other (s<br>below)   | pecify                                  |
| C/O REC  | GENXBIO  | INC.                                       |   |         | 4.1  | lf Ame  | endment, I | Date o                              | of Original  | Filed  | (Month/Da          | ay/Year)  |                                   |  | vidual or c                                       | loint/Group   | Filing  | (Check App   | plicable                                |
| 9804 MEDICAL CENTER DRIVE                                      |  |  |   |         |  |   |            |                                     |  |  |                    |   | Line)                             | ine)  Form filed by One Reporting Person |   |   |   |  |   |
| (Street)   | HIE N  | ID   | 20050   |         |  |   |            |                                     |  |  |                    |   |                                   |  |   | led by More   |   | One Repor  |   |
| ROCKV  | ILLE IV.   | ID   | 20850   |         |  | Rule 10b5-1(c) Transaction Indication                       |            |                                     |  |  |                    |   |                                   |  |   |   |   |  |   |
| (City) (State) (Zip)   |  |  |   |         | Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). See Instruction 10. |   |            |                                     |  |  |                    |   |                                   |  |   |   |   |  |   |
|  |  | Tab  | le I - Nor  | ı-Deriv | /ativ  | e Se  | curities   | s Ac                                | quired,  | Dis  | posed c            | f, or Be  | nefic                             | ially                                    | Owned   |   |   |  |   |
| 1. Title of Security (Instr. 3)  2. Transac Date (Month/Date)  |  |  |   |         |  | Execution Date,   |            | Transaction Dispose Code (Instr. 5) |  | rities Acquired (A) or<br>ed Of (D) (Instr. 3, 4 and |                    |   |                                   | es For<br>ally (D)<br>Following (I) (    |   | : Direct<br>r Indirect<br>str. 4)   | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership |  |   |
|  |  |  |   |         |  |   |            |                                     |  | v  | Amount             | (A) o<br>(D)  | r Pri                             | ce                                       | Reported<br>Transact<br>(Instr. 3                 | tion(s)   |   |  | (Instr. 4)                              |
| Common Stock 05/31/  |  |  |   |         | 1/2024   |   | A          |                                     | 4,790  | ) <sup>(1)</sup> A \$0                               |                    | 0.00  | 11,286                            |  |   | D   |   |  |   |
|  | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |  |   |         |  |   |            |                                     |  |  |                    |   |                                   |  |   |   |   |  |   |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)            | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security  | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deemed<br>Execution I<br>if any<br>(Month/Day | Date,   | Code (In:  |   |            |                                     | 6. Date Exercisable and Expiration Date (Month/Day/Year) |  |                    | 7. Title and Amount<br>of Securities<br>Underlying<br>Derivative Security<br>(Instr. 3 and 4) |                                   |  | . Price of<br>Perivative<br>Security<br>Instr. 5) | 9. Number<br>derivative<br>Securities<br>Beneficial<br>Owned<br>Following<br>Reported<br>Transactio<br>(Instr. 4) | ly  | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | Beneficial<br>Ownership<br>t (Instr. 4) |
|  |  |  |   |         | Code   | v   | (A)        | (D)                                 | Date<br>Exercisab  |  | Expiration<br>Date | Title   | Amor<br>or<br>Numl<br>of<br>Share | per                                      |   |   |   |  |   |
| Stock<br>Options<br>(Right to<br>Buy)                          | \$14.35  | 05/31/2024                                 |   |         | A  |   | 24,454     |                                     | (2)  | (  | 05/31/2034         | Common<br>Stock   | 24,4                              | 54                                       | \$0.00  | 24,454  | ļ   | D  |   |

# **Explanation of Responses:**

1. Represents shares of common stock underlying a time-based restricted stock unit award (RSU). 100% of the shares subject to this RSU will vest on May 1, 2025 subject to the continuous service of the recipient to the Issuer.

### Remarks:

/s/ Patrick J. Christmas as attorney-in-fact

06/04/2024

\*\* 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 4 (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.

<sup>2.</sup> The option will vest in 12 equal monthly installments following May 31, 2024 subject to the continuous service of the optionee to the Issuer.