FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL

| Section 16. Form | 4 or Form 5 | TATEMENT OF CHANGES IN BENE |
|-----------------------------------|--------------|---|
| obligations may contraction 1(b). | ontinue. See | Filed pursuant to Section 16(a) of the Securities |

FICIAL OWNERSHIP

Exchange Act of 1934 Eany Act of 1940 Section 30(h) of the

OMB Number: 3235-0287 Estimated average burden 0.5 hours per response

| 1. Name and Address of Reporting Person* Mills Kenneth T. | | | 2. Issuer Name and Ticker or Trading Symbol REGENXBIO Inc. [RGNX] | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) | | | | |
|--|---------|-----------------|--|------------|---|-----------------------|--|--|--|
| Will's Remeti 1. | | | | X | Director | 10% Owner | | | |
| | | (Middle) | 3. Date of Earliest Transaction (Month/Day/Year) 01/03/2018 | - x | Officer (give title below) President an | Other (specify below) | | | |
| C/O REGENXB | IO INC. | | 01/03/2010 | | r resident an | u CEO | | | |
| 9600 BLACKWELL ROAD, SUITE 210 | | SUITE 210 | | | | | | | |
| | | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | 6. Individual or Joint/Group Filing (Check Applicable | | | | |
| (Street) ROCKVILLE | MD | 20850 | | Line) X | Form filed by One Rep Form filed by More that | ů. | | | |
| (City) | (State) | (Zip) | | | Person | | | | |
| | | Table I - Non-D | erivative Securities Acquired, Disposed of, or Bene | ficially (| Owned | | | | |

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | | | | | | | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--|---|------|---|--------|---------------|-------|------------------------------------|---|---|
| | | | Code | v | Amount | (A) or (D) | Price | Transaction(s) (Instr. 3 and 4) | | (1150.4) |

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

| | (eigi, pate, calle, marante, optione, contentable cocartico) | | | | | | | | | | | | | | |
|---|---|--|---|------------------------------|---|------------|-----|--|--------------------|---|-------------------------------------|---|--|--|--|
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transa Code (8) | | Derivative | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
| | | | | Code | v | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | | (Instr. 4) | | |
| Stock Option (Right to Buy) | \$35.8 | 01/03/2018 | | A | | 163,500 | | (1) | 01/03/2028 | Common Stock | 163,500 | \$0.00 | 163,500 | D | |

Explanation of Responses:

1. 25% of the shares subject to this option shall vest after 12 months of continuous service with the Issuer. The balance will vest in equal monthly installments over the 36 months following January 3, 2019 while the optionee provides continuous service to the Issuer

Remarks:

EXHIBIT LIST - Exhibit 24 - Power of Attorney for Kenneth T. Mills

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

01/05/2018

Date

** Signature of Reporting Person

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.

POWER OF ATTORNEY

The undersigned individual (the "Reporting Person") hereby constitutes and appoints each of Patrick J. Christmas and Vittal K. Vasista, signing singly, with full power of substitution, as the Reporting Person's true and lawful attorney in fact to:

(1) prepare and file on behalf of such Reporting Person any and all reports, notices, communications and other documents (including, but not limited to, reports on Schedule 13D, Schedule 13G, Form 13-F, Form 3, Form 4 and Form 5) that such Reporting Person may be required to file with the Securities and Exchange Commission (the "SEC") pursuant to the Securities Act of 1933, as amended and the Securities Exchange Act of 1934, as amended (together with the implementing regulations thereto, the "Exchange Act") (collectively, the "Reports") with respect to the Reporting Person's ownership of, or transactions in, the securities of REGENXBIO Inc. (the "Company"), (whether directly or indirectly owned) by such Reporting Person;

(2) do and perform any and all acts for and on behalf of the Reporting Person which may be necessary or desirable to complete and execute any such Reports, complete and execute any amendment or amendments thereto, and timely file such form with the SEC and any stock exchange or similar authority; and

(3) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney in fact, may be of benefit to, in the best interest of, or legally required by, the Reporting Person, it being understood that the documents executed by such attorney in fact on behalf of the Reporting Person pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney in fact may approve in such attorney in fact's discretion.

The Reporting Person hereby grants to such attorney in fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the Reporting Person might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney in fact, or such attorney in fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this power of attorney and the rights and powers herein granted. The Reporting Person acknowledges that the foregoing attorney in fact, in serving in such capacity at the request of the Reporting Person, is not assuming any of the Reporting Person's responsibilities to comply with Section 16 of the Exchange Act.

This Power of Attorney with respect to the Reporting Person shall remain in full force and effect until such Reporting Person is no longer required to file any Reports with respect to the Reporting Person's ownership of, or transactions in, the securities of the Company, unless earlier revoked in a signed writing delivered to the foregoing attorney in fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 5th day of January, 2018.

/s/ Kenneth T. Mills Kenneth T. Mills