

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPROVAL | |
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

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>Yoo Stephen</u> (Last) (First) (Middle) C/O REGENXBIO INC. 9600 BLACKWELL ROAD, SUITE 210 (Street) ROCKVILLE MD 20850 (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>REGENXBIO Inc. [RGNX]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner X Officer (give title below) Other (specify below) <u>Chief Medical Officer</u> |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>07/20/2017</u> | |
| | | 6. Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person |

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 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 | | | |
| Common Stock | 07/20/2017 | | M ⁽¹⁾ | | 15,000 | A | \$0.85 | 15,000 | D | |
| Common Stock | 07/20/2017 | | S ⁽¹⁾ | | 15,000 | D | \$18.66 ⁽²⁾ | 0.00 | D | |

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

| 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. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 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) (Instr. 4) | 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 | | | | | | Amount or Number of Shares |
| Employee Stock Option (Right to Buy) | \$0.85 | 07/20/2017 | | M ⁽¹⁾ | | | 15,000 | (3) | 11/03/2024 | Common Stock | 15,000 | \$0.00 | 217,900 | D | |

Explanation of Responses:

- This transaction was effected pursuant to a Rule 10b5-1 trading plan.
- This transaction was executed in multiple trades at prices ranging from \$18.25 to \$19.00. The price reported above reflects the weighted average sale price. The reporting person hereby undertakes to provide upon request to the SEC staff, the issuer or a security holder of the issuer full information regarding the number of shares and prices at which the transaction was effected.
- The option, representing a right to purchase a total of 247,900 shares, became exercisable as follows: 165,200 of the shares subject to the option are initial shares ("Initial Shares") and 82,700 of the shares subject to the option are contingent shares ("Contingent Shares"). 23,600 of the Initial Shares vested on October 13, 2014, 35,400 of the Initial Shares vested on October 13, 2015 and an additional 2,950 of the Initial Shares vest upon each month of continuous service to the Company thereafter. 15% of the Contingent Shares were deemed vested as of October 13, 2014 on January 13, 2015 due to a subsequent event. The remainder of the Contingent Shares vest over four years of service following October 13, 2014, with 25% of the remaining 85% of Contingent Shares having vested on October 13, 2015 and the remaining Contingent Shares vesting in 36 equal monthly installments thereafter.

Remarks:

/s/ Stephen Yoo 07/24/2017
 ** 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.