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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

**SCHEDULE 13G**

Under the Securities Exchange Act of 1934 (Amendment No. \_\_1\_\_)\*

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**Regenxbio Inc.**

(Name of Issuer)

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Common Stock

(Title of Class of Securities)

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75901B107

(CUSIP Number)

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December 31, 2017

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

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\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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CUSIP NO. 75901B107

1. NAME OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

RTW Investments, LP

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)   
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

0

6. SHARED VOTING POWER

1,561,210\*

7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

1,561,210\*

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,561,210\*

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

5.01%\*

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

PN, OO, IA

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CUSIP NO. 75901B107

1. NAME OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Roderick Wong

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a) [ ]  
(b) [X]

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

0

6. SHARED VOTING POWER

1,561,210\*

7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

1,561,210\*

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,561,210\*

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

[ ]

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

5.01%\*

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IN, HC

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Item 1. (a). Name of Issuer:

Regenxbio Inc.

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(b). Address of issuer's principal executive offices:

9600 Blackwell Road, Suite 210

Rockville, MD 20850

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Item 2. (a). Name of person filing:

RTW Investments, LP

Roderick Wong

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(b). Address or principal business office or, if none, residence:

RTW Investments, LP

250 West 55<sup>th</sup> Street, 16<sup>th</sup> Floor

Suite A

New York, New York 10019

Roderick Wong

c/o RTW Investments, LP

250 West 55<sup>th</sup> Street, 16<sup>th</sup> Floor

Suite A

New York, New York 10019

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(c). Citizenship:

RTW Investments, LP – Delaware

Roderick Wong – United States of America

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(d). Title of class of securities:

Common Stock, \$0.0001 par value per share

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(e). CUSIP No.:

75901B107

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Item 3. If This Statement is filed pursuant to §§.240.13d-1(b) or 240.13d-2(b), or (c), check whether the person filing is a

N/A

Item 4. Ownership.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount beneficially owned:

RTW Investments, LP – 1,561,210\*  
Roderick Wong – 1,561,210\*

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(b) Percent of class:

RTW Investments, LP – 5.01%\*  
Roderick Wong – 5.01%\*

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(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote

RTW Investments, LP – 0  
Roderick Wong – 0

(ii) Shared power to vote or to direct the vote

RTW Investments, LP – 1,561,210\*  
Roderick Wong – 1,561,210\*

(iii) Sole power to dispose or to direct the disposition of

RTW Investments, LP – 0  
Roderick Wong – 0

(iv) Shared power to dispose or to direct the disposition of

RTW Investments, LP – 1,561,210\*  
Roderick Wong – 1,561,210\*

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\* The shares of common stock, \$0.0001 par value (the "Shares"), of Regenxbio Inc. (the "Company") reported herein are held by two or more funds (together the "Funds"), which are managed by RTW Investments, LP (the "Adviser"). The Adviser, in its capacity as the investment manager of the Funds, has the power to vote and the power to direct the disposition of all Shares held by the Funds. Accordingly, for the purposes of Reg. Section 240.13d-3, the Adviser may be deemed to beneficially own an aggregate of 1,561,210 Shares, or 5.01% of Shares deemed issued and outstanding as of November 3, 2017. Roderick Wong is the Managing Partner of the Adviser. The beneficial ownership percentage reported herein is based on 31,145,292 voting Shares issued and outstanding as of November 3, 2017, as disclosed in the Company's Quarterly Report filed with the Securities and Exchange Commission on November 8, 2017. This report shall not be deemed an admission that the Adviser, the Funds or any other person is the beneficial owner of the securities reported herein for purposes of Section 13 of the Securities Exchange Act of 1934, as amended, or for any other purpose. Each of the reporting persons herein disclaims beneficial ownership of the Shares reported herein except to the extent of the reporting person's pecuniary interest therein.

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Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [ ].

N/A

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Item 6. Ownership of More Than Five Percent on Behalf of Another Person.

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than 5 percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

N/A

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Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

If a parent holding company or control person has filed this schedule, pursuant to Rule 13d-1(b)(1)(ii)(G), so indicate under Item 3(g) and attach an exhibit stating the identity and the Item 3 classification of the relevant subsidiary. If a parent holding company or control person has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identification of the relevant subsidiary.

N/A

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Item 8. Identification and Classification of Members of the Group.

If a group has filed this schedule pursuant to §240.13d-1(b)(1)(ii)(J), so indicate under Item 3(j) and attach an exhibit stating the identity and Item 3 classification of each member of the group. If a group has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identity of each member of the group.

N/A

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Item 9. Notice of Dissolution of Group.

Notice of dissolution of a group may be furnished as an exhibit stating the date of the dissolution and that all further filings with respect to transactions in the security reported on will be filed, if required, by members of the group, in their individual capacity. See Item 5.

N/A

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Item 10. Certification.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: February 14, 2018

RTW Investments, LP

By: /s/ Roderick Wong  
Roderick Wong, Managing Partner

Roderick Wong

By: /s/ Roderick Wong  
Roderick Wong, Individually

The original statement shall be signed by each person on whose behalf the statement is filed or his authorized representative. If the statement is signed on behalf of a person by his authorized representative other than an executive officer or general partner of the filing person, evidence of the representative's authority to sign on behalf of such person shall be filed with the statement, provided, however, that a power of attorney for this purpose which is already on file with the Commission may be incorporated by reference. The name and any title of each person who signs the statement shall be typed or printed beneath his signature.

Note. Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See s.240.13d-7 for other parties for whom copies are to be sent.

Attention. Intentional misstatements or omissions of fact constitute Federal criminal violations (see 18 U.S.C. 1001).

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Joint Filing Statement  
Pursuant to Rule 13d-1(k)(1)

The undersigned hereby consent and agree to the joint filing of Schedule 13G Amendment No. 1 under the Securities Exchange Act of 1934, as amended, with respect to the common stock, \$0.0001 par value, of Regenxbio Inc. beneficially owned by them, together with any or all amendments thereto, when and if appropriate. The parties hereto further consent and agree to file this Joint Filing Statement pursuant to Rule 13d-1(k)(1)(iii) as an exhibit to Schedule 13G, thereby incorporating the same into such Schedule 13G.

This Joint Filing Statement may be terminated by any of the undersigned upon written notice or such lesser period of notice as the undersigned may mutually agree.

Dated: February 14, 2018

RTW Investments, LP

By: /s/ Roderick Wong

Roderick Wong, Managing Partner

Roderick Wong

By: /s/ Roderick Wong

Roderick Wong, Individually

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