

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM S-3  
REGISTRATION STATEMENT**  
*UNDER  
THE SECURITIES ACT OF 1933*

**REGENXBIO Inc.**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

47-1851754  
(IRS Employer  
Identification Number)

9804 Medical Center Drive  
Rockville, Maryland 20850  
(240) 552-8181  
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Curran Simpson  
President and Chief Executive Officer  
REGENXBIO Inc.  
9804 Medical Center Drive  
Rockville, Maryland 20850  
(240) 552-8181  
(Name, address, including zip code, and telephone number, including area code, of agent for service)

*With copies to:*

Patrick J. Christmas  
Executive Vice President, Chief Legal Officer  
REGENXBIO Inc.  
9804 Medical Center Drive  
Rockville, Maryland 20850  
(240) 552-8181

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One CityCenter  
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(202) 662-6000

**Approximate date of commencement of proposed sale to the public:** From time to time after this registration statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 under the Exchange Act.

Large accelerated filer   
Non-accelerated filer

Accelerated filer   
Smaller reporting company   
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

Subject to completion, dated June 13, 2025

PRELIMINARY PROSPECTUS



**Up to 268,096 Shares of Common Stock**

This prospectus relates to the resale of up to 268,096 shares of common stock, par value \$0.0001 per share (the “Shares”), of REGENXBIO Inc. (the “Company,” “we,” “our” or “us”) by the selling stockholder named in this prospectus (the “Selling Stockholder”). The Shares are issuable to the Selling Stockholder upon the exercise of a warrant to purchase up to 268,096 Shares (the “Warrant”) at an exercise price of \$14.92 per share, which Warrant was issued in a private placement in connection with the Loan Agreement, dated May 16, 2025, by and between REGENXBIO RS LLC, a wholly owned subsidiary of ours, and an affiliate of HealthCare Royalty Management, LLC.

We are registering the resale of the Shares on behalf of the Selling Stockholder, which it may offer and sell from time to time pursuant to this prospectus. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of the Shares by the Selling Stockholder. We will receive proceeds of up to approximately \$4.0 million upon the exercise in full of the Warrant by the Selling Stockholder for cash. For more information related to the Selling Stockholder, please refer to the section of this prospectus titled “*The Selling Stockholder*.”

The Selling Stockholder may sell the Shares at fixed prices, at prevailing market prices at the time of sale or at prices negotiated with the purchasers to or through underwriters, broker-dealers, agents, or through any other means described in the section of this prospectus titled “*Plan of Distribution*.” The Selling Stockholder will pay any discounts, commissions, and fees of underwriters, selling brokers, dealer managers or similar securities industry professionals incurred by such Selling Stockholder in disposing of the Shares covered by this prospectus. We will bear all costs, expenses and fees in connection with the registration of the Shares.

Our common stock is listed on The Nasdaq Global Select Market under the symbol “RGNX.” On June 12, 2025, the last reported sale price of our common stock was \$10.20.

**Investing in our securities involves significant risks. Before buying our securities, you should carefully read and consider the risks we describe in this prospectus and in any accompanying prospectus supplement, as well as the risk factors that are incorporated by reference into this prospectus and in any accompanying prospectus supplement from our filings made with the Securities and Exchange Commission. See “[Risk Factors](#)” beginning on page 3 of this prospectus.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is \_\_\_\_\_, 2025

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THE SELLING STOCKHOLDER IDENTIFIED IN THIS PROSPECTUS MAY NOT RESELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL NOR IS IT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY JURISDICTION WHERE SUCH OFFER OR SALE IS NOT PERMITTED.

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## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which are subject to the safe harbor created by those sections for such statements. These statements express a belief, expectation or intention, and are generally accompanied by words that convey projected future events or outcomes such as “anticipate,” “assume,” “believe,” “continue,” “could,” “design,” “estimate,” “expect,” “forecast,” “goal,” “intend,” “may,” “objective,” “plan,” “position,” “potential,” “predict,” “project,” “seek,” “should,” “will,” “would” or variations of such words or by similar expressions. We have based these forward-looking statements on our current expectations, estimates and assumptions and analyses in light of our experience and our perception of historical trends, current conditions and expected future developments, as well as other factors we believe are appropriate under the circumstances. However, whether actual results and developments will conform with our expectations and predictions is subject to a number of risks, uncertainties, assumptions and other important factors, including, but not limited to:

- our ability to establish and maintain development partnerships, including our collaboration with AbbVie Inc. to develop and commercialize ABBV-RGX-314 and our collaboration with Nippon Shinyaku Co., Ltd. to develop and commercialize RGX-121 and RGX-111;
- our ability to obtain and maintain regulatory approval of our product candidates, and the labeling for any approved products;
- the timing of enrollment, commencement, completion and the success of our AAVIATE®, AFFINITY BEYOND®, AFFINITY DUCHENNE®, ALTITUDE®, ASCENT™, ATMOSPHERE® and CAMPSITE® clinical trials;
- the timing of commencement and completion and the success of preclinical studies conducted by us and our development partners;
- the timely development and launch of new products;
- the scope, progress, expansion and costs of developing and commercializing our product candidates;
- our ability to obtain, maintain and enforce intellectual property protection for our product candidates and technology, and defend against third-party intellectual property-related claims;
- our expectations regarding the development and commercialization of product candidates currently being developed by third parties that utilize our technology;
- our anticipated growth strategies;
- our expectations regarding competition;
- the anticipated trends and challenges in our business and the market in which we operate;
- our ability to attract or retain key personnel;
- the size and growth of the potential markets for our product candidates and the ability to serve those markets;
- the rate and degree of market acceptance of any of our products that are approved;
- our expectations regarding our expenses and revenue;
- our expectations regarding our need for additional financing and our ability to obtain additional financing;
- our expectations regarding the outcome of legal proceedings;
- our expectations regarding regulatory developments in the United States and foreign countries;

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- the impact of any government-imposed tariffs or other trade barriers on cost of goods and services, particularly related to partnered product candidates; and
- changes in the financial markets and banking system that may affect the availability and terms on which we may obtain financing and our ability to accurately predict how long our existing cash resources will be sufficient to fund our anticipated operating expenses.

You should carefully read the section of this prospectus titled “*Risk Factors*,” as well as both the “*Risk Factors*” and “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*” sections included in our quarterly and annual filings with the U.S. Securities and Exchange Commission (the “SEC”), that are incorporated herein by reference, for a discussion of the risks, uncertainties, assumptions and other important factors that could cause our actual results or developments to differ materially and adversely from those projected in the forward-looking statements. The actual results or developments anticipated may not be realized or, even if substantially realized, they may not have the expected consequences to or effects on us or our businesses or operations. Such statements are not guarantees of future performance, and actual results or developments may differ materially and adversely from those projected in the forward-looking statements. These forward-looking statements made by us in this prospectus, or in the information incorporated by reference herein, speak only as of the date of the respective document. Except as required by law, we disclaim any duty to update any forward-looking statements, whether as a result of new information, future events, or otherwise.

## ABOUT THIS PROSPECTUS

This prospectus provides you with a general description of the Shares that may be resold by the Selling Stockholder. In certain circumstances, we may provide a prospectus supplement or free writing prospectus that will contain specific information about the terms of a particular offering by the Selling Stockholder. We also may provide a prospectus supplement to add, update or change information contained in this prospectus. To the extent there is a conflict between the information contained in this prospectus and in any prospectus supplement or free writing prospectus, you should rely on the information in the prospectus supplement or free writing prospectus, provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus or any prospectus supplement—the statement in the later-dated document modifies or supersedes the earlier statement.

You should read this prospectus together with the additional information about our company to which we refer you in the section of this prospectus titled “*Where You Can Find More Information.*”

**Neither we nor the Selling Stockholder has authorized anyone to provide you with information that is in addition to or different from that contained in this prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any information that others may provide. We will be offering to sell, and seeking offers to buy, our securities only in jurisdictions where such offers and sales are permitted. You should not assume that the information in this prospectus or any prospectus supplement or free writing prospectus that we have prepared or authorized is accurate as of any date other than the date of those documents, or that any information in documents that we have incorporated by reference is accurate except as of the date of such document, regardless of the time of delivery of this prospectus or any prospectus supplement or free writing prospectus, or the sale of any security hereunder. You should not consider this prospectus to be an offer or solicitation relating to the Shares in any jurisdiction in which such an offer or solicitation relating to the Shares is not authorized. Furthermore, you should not consider this prospectus to be an offer or solicitation relating to the Shares if the person making the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation.**

We note that the representations, warranties, covenants and agreements made in any agreement or instrument that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement or instrument, including in some cases, for the purpose of allocating risk among the parties to such agreements and instruments, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties and covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Unless the context otherwise requires, throughout this prospectus, the words “REGENXBIO,” “Company” “we,” “our” or “us,” refer to REGENXBIO Inc.

AAVIATE, AFFINITY BEYOND, AFFINITY DUCHENNE, ALTITUDE, ATMOSPHERE, CAMPSITE, NAV, NAVXpress, NAVXcell, REGENXBIO and the REGENXBIO logos are our registered trademarks. Any other trademarks appearing in this prospectus are the property of their respective holders.

## THE COMPANY

We are a leading clinical-stage biotechnology company seeking to improve lives through the curative potential of gene therapy. Our investigational gene therapies are designed to deliver functional genes to address genetic defects in cells, enabling the production of therapeutic proteins or antibodies that are intended to impact disease. Through a single administration, gene therapy could potentially alter the course of disease significantly and deliver improved patient outcomes with long-lasting effects.

Our investigational gene therapies use adeno-associated virus (AAV) vectors from our proprietary gene delivery platform, which we call our NAV<sup>®</sup> Technology Platform. AAV vectors are non-replicating viral delivery vehicles that are not known to cause disease. Our NAV Technology Platform consists of exclusive rights to a large portfolio of AAV vectors (NAV Vectors), including commonly used AAV8 and AAV9. We believe this platform forms a strong foundation for our current clinical-stage programs and, with our ongoing research and development, we expect to continue to expand our platform and pipeline of potential AAV vector-based gene therapies. We refer to commercial and investigational AAV vector-based gene therapies as AAV Therapeutics. Our NAV Technology Platform is the foundation for commercial and investigational AAV Therapeutics that have treated thousands of patients through our clinical pipeline and NAV licensees.

Our principal executive offices are located at 9804 Medical Center Drive, Rockville, Maryland 20850, and our telephone number is (240) 552-8181.

## **RISK FACTORS**

Investing in our securities involves risk. You should carefully read and consider the specific risks discussed or incorporated by reference into this prospectus, together with all the other information contained in this prospectus or incorporated by reference into this prospectus, including the risks, uncertainties and assumptions discussed under the “*Risk Factors*” section in any documents we file with the SEC, and specifically, you should read and consider the “*Risk Factors*” section found in our most recent Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K. These risk factors may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future or by a prospectus supplement relating to a particular offering of our securities. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in our SEC filings or any prospectus supplement, or if any additional risks or uncertainties actually occur, our business, financial condition and results of operations could be materially and adversely affected. In that case, the trading price of our securities could decline and you might lose all or part of your investment.

## USE OF PROCEEDS

We will not receive any proceeds from the sale of the Shares. All proceeds from the sale of the Shares will be for the account of the Selling Stockholder. However, the Company will receive the proceeds of any cash exercise of the Warrant. If the Warrant is exercised in full for cash, we would receive aggregate proceeds of approximately \$4.0 million.

We will bear all other costs, fees and expenses incurred in effecting the registration of the Shares covered by this prospectus, including without limitation, registration, qualification, filing fees, Nasdaq listing fees and fees and expenses of our counsel and our accountants. The Selling Stockholder will pay any discounts, commissions, and fees of underwriters, selling brokers, dealer managers or similar securities industry professionals incurred by such Selling Stockholder in disposing of the Shares covered by this prospectus.

## DESCRIPTION OF CAPITAL STOCK

The following description is a general summary of the terms of the shares of common stock and shares of preferred stock that we may issue. The description below, and in any prospectus supplement, does not include all of the terms of the shares of common stock or shares of preferred stock and should be read together with our restated certificate of incorporation and amended and restated bylaws, copies of which have been filed previously with the SEC. For more information on how you can obtain copies of our restated certificate of incorporation and amended and restated bylaws, see the section titled “*Where You Can Find More Information.*”

### ***Authorized Capital Stock***

Our authorized capital stock consists of 110,000,000 shares, of which 100,000,000 shares are designated as common stock, par value \$0.0001 per share, and 10,000,000 shares are designated as preferred stock, par value \$0.0001 per share. The outstanding shares of our common stock are fully paid and non-assessable. As of June 9, 2025, we had 50,388,693 shares of common stock outstanding held of record by five stockholders. No shares of preferred stock were outstanding as of such date.

### ***Dividend Rights***

Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of assets legally available at the times and in the amounts that our board of directors may determine from time to time.

### ***Preemptive and Conversion Rights***

Holders of common stock have no preemptive or conversion rights or other subscription rights.

### ***Redemption and Sinking Fund Rights***

There are no redemption or sinking fund provisions applicable to our common stock.

### ***Liquidation Rights***

Upon our liquidation, dissolution or winding-up, the holders of common stock are entitled to share ratably in all assets remaining after payment of all liabilities and the liquidation preferences of any outstanding preferred stock.

### ***Voting Rights***

Each holder of common stock is entitled to one vote per share on all matters submitted to a vote of stockholders. Notwithstanding the previous sentence, unless otherwise provided by law holders of common stock are not entitled to vote on any amendment to our restated certificate of incorporation that relates solely to the terms of any preferred stock if the holders of such preferred stock are entitled to vote on such amendment. Except as otherwise provided by law, our restated certificate of incorporation or our amended and restated bylaws, all matters other than the election of directors shall be decided by the affirmative vote of a majority of the voting power of the outstanding voting stock that is present in person or represented by proxy at a meeting of stockholders and entitled to vote thereon. Except as otherwise set forth in the restated certificate of incorporation with respect to the right of holders of any series of preferred stock or any other series or class of stock to elect additional directors under specified circumstances, a plurality of votes cast shall elect directors.

We have not provided for cumulative voting in the election of directors.

The General Corporation Law of the State of Delaware, or the Delaware General Corporation Law, provides that holders of a class of stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of the holders of that class of stock for proposals that adversely affect such holders.

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### *Anti-Takeover Effects of Delaware Law and Our Restated Certificate of Incorporation and Amended and Restated Bylaws*

Delaware law, our restated certificate of incorporation and our amended and restated bylaws contain provisions that could make it more difficult to effect an acquisition of us by means of a tender offer, proxy contest or otherwise, or to remove our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish, or could deter, transactions that stockholders otherwise consider to be in our or their best interest, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unsolicited or unfriendly proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

#### *Delaware Business Combination Statute*

We are subject to Section 203 of the Delaware General Corporation Law. Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years following the time of the transaction in which the person or entity became an interested stockholder, unless:

- prior to that time, either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder is approved by the board of directors of the corporation;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the outstanding voting stock of the corporation, excluding for this purpose shares owned by persons who are directors and also officers of the corporation and by specified employee benefit plans; or
- at or after such time, the business combination is approved by the board of directors of the corporation and by the affirmative vote, and not by written consent, of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

For the purposes of Section 203, a “business combination” is broadly defined to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder, subject to limited exceptions;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

An “interested stockholder” is a person who, together with affiliates and associates, owns or within the immediately preceding three years did own 15% or more of the corporation’s voting stock.

#### *Undesignated Preferred Stock*

The ability of our board of directors, without action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with voting or other rights or preferences as designated by our board of directors

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could impede the success of any attempt to change control of us. The existence of authorized but unissued shares of preferred stock may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

### *Stockholder Action by Written Consent; Stockholder Meetings*

Our restated certificate of incorporation and amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting. As a result, a holder controlling a majority of our capital stock would not be able to amend our bylaws or remove directors without holding a meeting of our stockholders called in accordance with our amended and restated bylaws. Our restated certificate of incorporation and amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board or our chief executive officer (or if there is no chief executive officer, the president), or by a resolution adopted by a majority of our board of directors. These provisions might delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.

### *Requirements for Advance Notification of Stockholder Nominations and Proposals*

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors. These provisions could have the effect of delaying until the next stockholder meeting stockholder actions that are favored by the holders of a majority of our outstanding voting securities.

### *Staggered Board*

Our board of directors is divided into three classes. The directors in each class will serve for a three-year term, one class being elected each year by our stockholders. This system of electing and removing directors may discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

### *Removal of Directors*

Our restated certificate of incorporation provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of holders of at least two-thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

### *Board of Directors Vacancies*

Our restated certificate of incorporation and amended and restated bylaws authorize our board of directors to fill vacant directorships. In addition, the number of directors constituting our board of directors is set only by resolution adopted by a majority vote of our entire board of directors. These provisions will prevent a stockholder from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.

### *Stockholders Not Entitled to Cumulative Voting*

Our restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our preferred stock may be entitled to elect.

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### *Amendment of Charter and Bylaw Provisions*

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock, would require approval by holders of at least two-thirds of the total voting power of all of our outstanding voting stock. In addition, the affirmative vote of the holders of at least two-thirds of the total voting power of all of our outstanding voting stock is required for stockholders to amend our amended and restated bylaws.

The provisions of Delaware law, our restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

### *Choice of Forum*

Our restated certificate of incorporation provides that the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware) will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our restated certificate of incorporation or amended and restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Additionally, if the subject matter of any action within the scope of the preceding sentence is filed in a court other than a court located within the State of Delaware, or is a “foreign action” (as defined in our restated certificate of incorporation), in the name of any stockholder, such stockholder shall be deemed to have consented to (i) the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce the preceding sentence and (ii) having service of process made upon such stockholder in any such action by service upon such stockholder’s counsel in the foreign action as agent for such stockholder.

Additionally, our restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall, to the fullest extent permitted by law, be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to this provision.

The enforceability of similar choice of forum provisions in other companies’ certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable.

### *Indemnification*

Our restated certificate of incorporation includes provisions that limit the liability of our directors for monetary damages for breach of their fiduciary duty as directors, except for liability that cannot be eliminated under the Delaware General Corporation Law. Accordingly, our directors will not be personally liable for monetary damages for breach of their fiduciary duty as directors, except for liabilities:

- for any breach of the director’s duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- for unlawful payments of dividends or unlawful stock repurchases or redemptions, as provided under Section 174 of the Delaware General Corporation Law; or
- for any transaction from which the director derived an improper personal benefit.

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Any amendment or repeal of these provisions will require the approval of the holders of shares representing at least two-thirds of the shares entitled to vote in the election of directors, voting as one class.

Our restated certificate of incorporation and amended and restated bylaws also provide that we will indemnify our directors and officers to the fullest extent permitted by Delaware law. Our amended and restated bylaws also permit us to purchase insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions as our officer, director, employee or agent, regardless of whether Delaware law would permit indemnification. We have entered into separate indemnification agreements with our directors and officers that require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified. We believe that the limitation of liability provision in our restated certificate of incorporation and the indemnification agreements facilitate our ability to continue to attract and retain qualified individuals to serve as directors and officers. The limitation of liability and indemnification provisions in our restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

### ***Stock Exchange Listing***

Our common stock is listed on The Nasdaq Global Select Market under the symbol "RGNX."

### ***Transfer Agent and Registrar***

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A.

**THE SELLING STOCKHOLDER**

We have prepared this prospectus to allow the Selling Stockholder to sell or otherwise dispose of, from time to time, up to 268,096 Shares of our common stock issuable upon the Selling Stockholder's exercise of the Warrant at an exercise price of \$14.92 per share, which Warrant was issued in connection with execution of a Loan Agreement, dated May 16, 2025, by and between REGENXBIO RS LLC, a wholly owned subsidiary of the Company, and an affiliate of HealthCare Royalty Management, LLC. We issued the Warrant on May 16, 2025 in a private placement conducted, in reliance upon Section 4(a)(2) of the Securities Act.

The following table sets forth the identity of the Selling Stockholder, the number of Shares and the percentage of Shares beneficially owned by the Selling Stockholder and its affiliates prior to this offering, the number of Shares that may be offered under this prospectus by the Selling Stockholder, and the number of shares of our Common Stock and the percentage of our Common Stock to be beneficially owned by the Selling Stockholder and its affiliates after the completion of this offering, assuming that all Shares offered hereunder are sold by the Selling Stockholder as contemplated herein. The number of Shares in the column "Maximum number of shares that may be offered" represents all of the Shares that the Selling Stockholder may offer under this prospectus. For purposes of the table below, the beneficial ownership amounts and percentages are based on a total of 50,388,693 shares of our common stock outstanding as of June 9, 2025.

Information about additional selling stockholders, if any, including their identities and the Shares to be registered on their behalf, may be set forth in a prospectus supplement, in a post-effective amendment or in filings that we make with the SEC under the Exchange Act, which are incorporated by reference in this prospectus. Information concerning the Selling Stockholder may change from time to time. Any changes to the information provided below will be set forth in a supplement to this prospectus, in a post-effective amendment or in filings we make with the SEC under the Exchange Act, which are incorporated by reference into this prospectus, if and when necessary.

	Shares beneficially owned				
	Shares beneficially owned prior to this offering <sup>(1)</sup>		Maximum number of shares that may be offered	Shares beneficially owned after this offering	
	Number	Percentage		Number	Percentage
HCR RGNX ROYALTY SPV, LP <sup>(2)</sup>	268,096	*	268,096	0	-

(1) For purposes of this table, a person is deemed to have "beneficial ownership" of any shares that are currently exercisable or exercisable within 60 days of the date of this prospectus in accordance with SEC rules.

(2) HealthCare Royalty Management, LLC is the investment manager for each of HCRX Master GP LLC ("Master GP") and HCR Stafford II GP, LLC ("Stafford II GP"). Master GP and Stafford II GP are the general partners of HCRX Investments HoldCo, L.P. and HCR Stafford Fund II, L.P., respectively, which collectively own 100% of the partnership interest in the Selling Stockholder. Clark B. Futch may be deemed to have investment discretion and voting power with respect to the shares held by the Selling Stockholder due to his role in directing the investment decisions of HealthCare Royalty Management LLC and through his service as Chief Executive Officer of Master GP and Stafford II GP. The address of the Selling Stockholder is c/o HCRX Investments HoldCo, L.P., 300 Atlantic Street, Suite 600, Stamford, CT 06901.

\* Less than 1%.

## PLAN OF DISTRIBUTION

The Selling Stockholder may, from time to time, offer some or all of the Shares by this prospectus. We will not receive any of the proceeds from the sale of the Shares by the Selling Stockholder. The Selling Stockholder will act independently of us in making decisions with respect to the timing, manner and size of each sale. We will bear all fees and expenses incident to our obligation to register the Shares.

The Selling Stockholder may sell all or a portion of the Shares beneficially owned by it and offered hereby from time to time directly to one or more purchasers or to or through one or more underwriters, broker-dealers or agents or through a combination of any of these methods. If the Shares are sold through underwriters or broker-dealers, the Selling Stockholder will be responsible for underwriting discounts or commissions or agent's commissions in connection with the sale of the Shares. The Shares may be sold on any national securities exchange on which the Shares may be listed at the time of sale, in the over-the-counter market or in transactions other than on such exchange or in the over-the-counter market and in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at privately negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions.

The Selling Stockholder may use any one or more of the following methods when disposing of the Shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the Shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an over-the-counter distribution;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales effected after the effective date of the registration statement of which this prospectus is a part;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- in "at the market" offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- through trading plans entered into by the Selling Stockholder pursuant to Rule 10b5-1 under the Exchange Act, that are in place at the time of an offering pursuant to this prospectus that provides for periodic sales of their securities on the basis of parameters described in such trading plans;
- through firm-commitment underwritten public offerings;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Stockholder may, from time to time, pledge or grant a security interest in some or all of the Shares owned by it and, if it defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell the Shares from time to time under this prospectus or under an amendment or supplement to this prospectus to include the pledgee, transferee, or other successors in interest as the Selling Stockholder under this prospectus. The Selling Stockholder also may transfer the Shares in other circumstances, in which case the transferees, pledgees or other successors in interest will be the beneficial owners for purposes of this prospectus.

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In connection with the sale of Shares, the Selling Stockholder may enter into hedging transactions with broker-dealers or affiliates thereof or other financial institutions, which may in turn engage in short sales of our common stock in the course of hedging the positions it assumes. The Selling Stockholder may also sell shares of common stock short and deliver the Shares to close out its short positions, or loan or pledge the Shares to broker-dealers that in turn may sell these securities. The Selling Stockholder may also enter into option or other transactions with broker-dealers or affiliates thereof or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or affiliates thereof or other financial institution of Shares offered by this prospectus, which Shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

In addition, the Selling Stockholder may enter into derivative or hedging transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. In connection with such a transaction, the third parties may sell the applicable securities covered by and pursuant to this prospectus or any pricing supplement, as the case may be. If so, the third party may use securities borrowed from the Selling Stockholder or others to settle such sales and may use securities received from the Selling Stockholder to close out any related short positions. The Selling Stockholder may also loan or pledge securities covered by this prospectus to third parties, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus or any pricing supplement, as the case may be.

In addition, the Selling Stockholder may elect to make a pro rata in-kind distribution of securities to its members, partners or stockholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus with a plan of distribution. Such members, partners or stockholders would thereby receive freely tradeable securities pursuant to the distribution through a registration statement. To the extent a distributee is our affiliate (or to the extent otherwise required by law), we may, at our option, file a prospectus supplement in order to permit the distributees to use the prospectus to resell the securities acquired in the distribution.

Unless otherwise specified in connection with any particular offering of Shares, the obligations of the underwriters to purchase the Shares will be subject to certain conditions contained in an underwriting agreement that the Selling Stockholder will enter into with the underwriters at the time of the sale to them. The underwriters will be obligated to purchase all of the Shares offered if any of the Shares are purchased, unless otherwise specified in connection with any particular offering of Shares. Any initial offering price and any discounts or concessions allowed, reallocated or paid to dealers may be changed from time to time.

The Selling Stockholder may designate agents to sell the Shares. Unless otherwise specified in connection with any particular offering of Shares, the agents will agree to use their best efforts to solicit purchases for the period of their appointment. The Selling Stockholder may also sell the Shares to one or more remarketing firms, acting as principals for their own accounts or as agents for the Selling Stockholder. These firms will remarket the Shares upon purchasing them in accordance with a redemption or repayment pursuant to the terms of the Shares. A prospectus supplement or any pricing supplement, as the case may be, will identify any remarketing firm and will describe the terms of its agreement, if any, with the Selling Stockholder and its compensation.

In connection with offerings made through underwriters or agents, the Selling Stockholder may enter into agreements with such underwriters or agents pursuant to which the Selling Stockholder receives our outstanding securities in consideration for the Shares being offered to the public for cash. In connection with these arrangements, the underwriters or agents may also sell Shares covered by this prospectus to hedge their positions in these outstanding securities, including in short sale transactions. If so, the underwriters or agents may use the Shares received from the Selling Stockholder under these arrangements to close out any related open borrowings of securities.

Broker-dealers engaged by the Selling Stockholder may arrange for other broker-dealers to participate in sales. If the Selling Stockholder effects certain transactions by selling Shares to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts,

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concessions or commissions from the Selling Stockholder or commissions from purchasers of the Shares for whom they may act as agent or to whom they may sell as principal. Such commissions will be in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction will not be in excess of a customary brokerage commission in compliance with applicable rules of the Financial Industry Regulatory Authority, Inc. ("FINRA"); and in the case of a principal transaction, a markup or markdown in compliance with applicable FINRA rules.

The aggregate proceeds to the Selling Stockholder from the sale of the Shares offered by it will be the purchase price of the Shares less the Warrant exercise price and discounts or commissions, if any. The Selling Stockholder reserves the right to accept and, together with its agents from time to time, to reject, in whole or in part, any proposed purchase of Shares to be made directly or through agents. The Selling Stockholder also may resell all or a portion of the Shares in open market transactions in reliance upon Rule 144 under the Securities Act, rather than under this prospectus, provided that it meets the criteria and conforms to the requirements of that rule.

To the extent required pursuant to Rule 424(b) under the Securities Act, the Shares to be sold, the name of the Selling Stockholder, the purchase price and public offering price and the net proceeds to be received by the Selling Stockholder from the sale, the names of any agents, dealer or underwriter and the amount of Shares underwritten or purchased by each of them, if any, any applicable commissions or discounts with respect to a particular offer, any delayed delivery arrangements and any securities exchange or markets on which the Shares may be listed will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

The Selling Stockholder may authorize agents, dealers or underwriters to solicit certain institutional investors to purchase Shares on a delayed delivery basis pursuant to delayed delivery contracts providing for payment and delivery on a specified future date.

The Selling Stockholder will enter into such delayed contracts only with institutional purchasers that it approves. These institutions may include commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions.

In order to comply with the securities laws of some states, if applicable, the Shares may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the Shares may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

The Selling Stockholder may have agreements with agents, underwriters, dealers and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act. Agents, underwriters, dealers and remarketing firms, and their affiliates, may engage in transactions with, or perform services for, the Selling Stockholder in the ordinary course of business. This includes commercial banking and investment banking transactions.

The Selling Stockholder and any other person participating in a sale of the Shares registered under this prospectus will be subject to applicable provisions of the Exchange Act, and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the Shares by the Selling Stockholder and any other participating person. All of the foregoing may affect the marketability of the Shares and the ability of any person or entity to engage in market-making activities with respect to the Shares. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the Selling Stockholder for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The Selling Stockholder may indemnify any broker-dealer that participates in transactions involving the sale of the Shares against certain liabilities, including liabilities arising under the Securities Act.

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In connection with any offering of Shares, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, syndicate covering transactions and stabilizing transactions. Short sales involve syndicate sales of common stock in excess of the number of shares to be purchased by the underwriters in the offering, which creates a syndicate short position. “Covered” short sales are sales of shares made in an amount up to the number of shares represented by the underwriters’ over-allotment option. In determining the source of shares to close out the covered syndicate short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. Transactions to close out the covered syndicate short involve either purchases of the common stock in the open market after the distribution has been completed or the exercise of the over-allotment option. The underwriters may also make “naked” short sales of shares in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing shares of common stock in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of bids for or purchases of shares in the open market while the offering is in progress for the purpose of pegging, fixing or maintaining the price of the securities.

In connection with any offering, the underwriters may also engage in penalty bids. Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

### **LEGAL MATTERS**

The validity of the Shares offered by this prospectus will be passed upon for us by Covington & Burling LLP, Washington, D.C.

### **EXPERTS**

The financial statements and management’s assessment of the effectiveness of internal control over financial reporting (which is included in Management’s Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2024 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

### **WHERE YOU CAN FIND MORE INFORMATION**

We file annual, quarterly and other reports, proxy and information statements and other information with the SEC. Our SEC filings are available to the public on the SEC’s website, [www.sec.gov](http://www.sec.gov).

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The SEC allows us to “incorporate by reference” into this prospectus the information contained in documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we subsequently file with the SEC will automatically update and supersede this information. The following documents that we previously filed with the SEC (File No. 001-37553) are incorporated by reference herein:

- our [Annual Report on Form 10-K for the year ended December 31, 2024](#), filed with the SEC on March 13, 2025;
- our [Quarterly Report on Form 10-Q for the quarter ended March 31, 2025](#), filed with the SEC on May 12, 2025;
- our Current Reports on Form 8-K filed with the SEC on [January 14, 2025](#) (Item 1.01 only), [March 4, 2025](#) (Item 8.01 only), [May 19, 2025](#) (Items 1.01 and 2.03 only), and [June 3, 2025](#);
- the description of our common stock set forth in [Exhibit 4.2](#) to our Annual Report on Form 10-K for the year ended December 31, 2024, filed with the SEC on March 13, 2025, and all amendments and reports updating such description.

All reports and other documents that we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the completion of the sales of the securities offered hereby, but excluding any information furnished to, rather than filed with, the SEC (unless expressly incorporated by reference herein), will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the time of the filing of such reports and documents.

This prospectus may contain information that updates, modifies or is contrary to information herein or in one or more of the documents incorporated by reference in this prospectus. We have not authorized anyone else to provide you with different or additional information. You should not assume that the information in this prospectus is accurate as of any date other than the date of this prospectus or the date of the documents incorporated by reference in this prospectus.

We make available, free of charge, through our website at [www.regenxbio.com](http://www.regenxbio.com) our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and proxy and information statements, including any applicable amendments, filed or furnished pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information on, or that can be accessed through, our website is not incorporated into this prospectus or other securities filings and is not a part of these filings. You may also obtain, free of charge, a copy of any of these documents (other than exhibits to these documents unless the exhibits are specifically incorporated by reference into these documents or referred to in this prospectus) by writing or calling us at:

REGENXBIO Inc.  
Attention: Chief Legal Officer  
9804 Medical Center Drive  
Rockville, MD 20850  
(240) 552-8181



**Up to 268,096 Shares of Common Stock**

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**PROSPECTUS**

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, 2025

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**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution**

The following table sets forth an itemization of all estimated expenses in connection with the issuance and distribution of the securities being registered, all of which will be borne by the registrant.

SEC registration fee	\$ 612.40
Legal fees and expenses	\$ 30,000.00
Accounting fees and expenses	\$ 15,000.00
Miscellaneous expenses	\$ 5,000.00
Total	<u>\$ 50,612.40</u>

**Item 15. Indemnification of Directors and Officers**

Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of its directors to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

As permitted by the Delaware General Corporation Law, our restated certificate of incorporation and amended and restated bylaws contain provisions relating to the limitation of liability and indemnification of directors and officers. The restated certificate of incorporation provides that our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- in respect of unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- for any transaction from which the director derives any improper personal benefit.

Our restated certificate of incorporation also provides that if Delaware law is amended after the approval by our stockholders of the certificate of incorporation to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law.

Our amended and restated bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by Delaware law, as it now exists or may in the future be amended, against all expenses and liabilities reasonably incurred in connection with their service for or on our behalf. Our amended and restated bylaws provide that we shall advance the expenses incurred by a director or officer in advance of the final disposition of an action or proceeding, and permit us to secure insurance on behalf of any director, officer, employee, or other enterprise agent for any liability arising out of his or her action in that capacity, whether or not Delaware law would otherwise permit indemnification.

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We either have entered or intend to enter into indemnification agreements with each of our directors and executive officers and certain other key employees. The form of agreement provides that we will indemnify each of our directors, executive officers and such other key employees against any and all expenses incurred by that director, executive officer, or other key employee because of his or her status as one of our directors, executive officers, or other key employees, to the fullest extent permitted by Delaware law, our restated certificate of incorporation and our amended and restated bylaws. In addition, the form agreement provides that, to the fullest extent permitted by Delaware law, we will advance all expenses incurred by our directors, executive officers and other key employees in connection with a legal proceeding.

We currently carry and intend to continue to carry liability insurance for our directors and officers.

At present, there is no pending litigation or proceeding involving any of our directors, officers or employees in which indemnification will be required or permitted. We are not aware of any threatened litigation or proceeding that might result in a claim for such indemnification.

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### **Item 16. Exhibits**

<u>Exhibit Number</u>	<u>Description</u>
4.1	<a href="#"><u>Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on January 7, 2021).</u></a>
4.2	<a href="#"><u>Amended and Restated Bylaws (incorporated herein by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K filed on September 22, 2015).</u></a>
4.3	<a href="#"><u>Description of Common Stock (incorporated herein by reference to Exhibit 4.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2024).</u></a>
4.4	<a href="#"><u>Specimen Stock Certificate Evidencing Shares of the Company's Common Stock (incorporated herein by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1 filed on August 17, 2015).</u></a>
4.5	<a href="#"><u>Form of Warrant.</u></a>
5.1	<a href="#"><u>Opinion of Covington &amp; Burling LLP.</u></a>
23.1	<a href="#"><u>Consent of PricewaterhouseCoopers LLP.</u></a>
23.2	<a href="#"><u>Consent of Covington &amp; Burling LLP (included in Exhibit 5.1).</u></a>
24.1	<a href="#"><u>Power of Attorney (included on signature page hereto).</u></a>
107	<a href="#"><u>Filing Fee Table.</u></a>

**Item 17. Undertakings**

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

*provided, however*, that paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of this registration statement or made in a document incorporated or deemed incorporated by reference into this registration statement or prospectus that is a part of this registration statement will, as to a purchaser with a time of contract sale prior to such effective date, supersede or modify any statement that was made in this

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registration statement or prospectus that was a part of this registration statement or made in any such document immediately prior to such effective date.

(5) That, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(6) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted against the registrant by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Rockville, State of Maryland, on the 13th day of June, 2025.

**REGENXBIO INC.**

By: /s/ Curran Simpson  
Curran Simpson  
President and Chief Executive Officer

**POWER OF ATTORNEY**

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Curran Simpson, Mitchell Chan and Patrick J. Christmas, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the United States Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated on June 13, 2025.

<u>Signature</u>	<u>Title</u>
<u>/s/ Curran Simpson</u> Curran Simpson	President and Chief Executive Officer and Director (Principal Executive Officer)
<u>/s/ Mitchell Chan</u> Mitchell Chan	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
<u>/s/ Kenneth T. Mills</u> Kenneth T. Mills	Chairman of the Board of Directors
<u>/s/ Jean Bennett</u> Jean Bennett	Director
<u>/s/ Allan M. Fox</u> Allan M. Fox	Director
<u>/s/ Alexandra Glucksmann</u> Alexandra Glucksmann	Director

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<u>Signature</u>	<u>Title</u>
<u>/s/ A.N. "Jerry" Karabelas</u> A.N. "Jerry" Karabelas	Director
<u>/s/ George Migausky</u> George Migausky	Director
<u>/s/ David C. Stump</u> David C. Stump	Director
<u>/s/ Daniel Tassé</u> Daniel Tassé	Director
<u>/s/ Jennifer Zachary</u> Jennifer Zachary	Director

**REGENXBIO INC.**  
**WARRANT TO PURCHASE COMMON STOCK**

Number of Warrant Shares: 268,096

(subject to adjustment)

Original Issue Date: May 16, 2025

Warrant No. 1

REGENXBIO Inc., a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, HCR RGNX ROYALTY SPV, L.P. or its permitted registered assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company up to a total of 268,096 shares of common stock, \$0.0001 par value per share (the “**Common Stock**”), of the Company (each such share, a “**Warrant Share**” and all such shares, the “**Warrant Shares**”) at an exercise price per share equal to \$14.92 per share (as adjusted from time to time as provided in Section 9 herein, the “**Exercise Price**”) upon surrender of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the “**Warrant**”) at any time on or after the date hereof (the “**Original Issue Date**”) and on or prior to May 16, 2035, subject to the following terms and conditions:

1. *Definitions.* For purposes of this Warrant, the following terms shall have the following meanings:

(a) “**Affiliate**” means any Person directly or indirectly controlled by, controlling or under common control with, a Holder, as such terms are used in and construed under Rule 405 under the Securities Act, but only for so long as such control shall continue.

(b) “**Commission**” means the United States Securities and Exchange Commission.

(c) “**Closing Sale Price**” means, for any security as of any date, the last trade price for such security on the Principal Trading Market for such security, as reported by Bloomberg L.P., or, if such Principal Trading Market begins to operate on an extended hours basis and does not designate the last trade price, then the last trade price of such security prior to 4:00 P.M., New York City time, as reported by Bloomberg L.P., or if the security is not listed for trading on a national securities exchange or other trading market on the relevant date, the last quoted bid price for the security in the over-the-counter market on the relevant date as reported by OTC Markets Group Inc. (or a similar organization or agency succeeding to its functions of reporting prices). If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then the Board of Directors of the Company shall use its good faith judgment to determine the fair market value. The Board of Directors’ determination shall be binding upon all parties absent demonstrable error. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

(d) “**Principal Trading Market**” means the national securities exchange or other trading market on which the Common Stock is primarily listed on and quoted for trading, which, as of the Original Issue Date, shall be the Nasdaq Global Select Market.

(e) “**Securities Act**” means the Securities Act of 1933, as amended.

(f) “**Trading Day**” means any day on which the Principal Trading Market is open for trading. If the Common Stock is not listed or admitted for trading, “**Trading Day**” means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in New York City are authorized or required by law or other governmental action to close.

(g) “**Transfer Agent**” means Computershare Trust Company, N.A., the Company’s transfer agent and registrar for the Common Stock, and any successor appointed in such capacity.

2. *Issuance of Securities; Registration of Warrants.* The Company shall register ownership of this Warrant, upon records to be maintained by the Company for that purpose (the “**Warrant Register**”), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any assignee to which this Warrant is assigned hereunder) from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

3. *Registration of Transfers.* Subject to compliance with all applicable securities laws and, if applicable, the rules of the Principal Trading Market, the Company shall register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, and payment for all applicable transfer taxes (if any) by the Holder or any subsequent holder. Any Holder desiring to register the transfer of this Warrant shall make such request in writing delivered to the Company, and shall surrender to the Company this Warrant. In the case of registration of transfer, such Holder shall provide a signature guarantee (a “**Signature Guarantee**”) from an eligible guarantor institution participating in a signature guarantee program approved by the Securities Transfer Association and such other documentation as the Company may reasonably request. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a “**New Warrant**”) evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant. The Company shall prepare, issue and deliver at the Company’s own expense any New Warrant under this Section 3. Until due presentment for registration of transfer, the Company may treat the registered Holder hereof as the owner and holder for all purposes, and the Company shall not be affected by any notice to the contrary.

4. *Exercise and Duration of Warrants.*

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by this Warrant at any time and from time to time on or after the Original Issue Date and on or prior to May 16, 2035.

(b) The Holder may exercise this Warrant by delivering (as determined in accordance with the notice provisions hereof) to the Company an exercise notice, in the form attached as Schedule 1 hereto (the “**Exercise Notice**”), completed and duly signed. The exercise of this Warrant shall take the form of a “cashless exercise” pursuant to Section 10 below unless expressly indicated to the contrary in the Exercise Notice. If the exercise is not a cashless exercise, then the Holder shall make payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised within one (1) Trading Day following the date of delivery of the Exercise Notice. The date on which the Notice of Exercise is delivered to the Company (as determined in accordance with the notice provisions hereof) is an “**Exercise Date**” provided, that in the case of an exercise that is not a cashless exercise, if the Exercise Price is not delivered on or before one (1) Trading Day following the date of delivery of the Exercise Notice, the Exercise Date shall be deemed to be one (1) Trading Day following the date of that the Exercise Price is delivered to the Company. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares, if any.

(c) If the Holder has not elected to exercise any portion of this Warrant prior to expiration of this Warrant pursuant to Section 4(a), then this Warrant shall automatically (without any act on the part of the Holder) be exercised, as a cashless exercise, pursuant to Section 4(b) effective immediately prior to the expiration of the Warrant to the extent such cashless exercise would result in the issuance of Warrant Shares, unless Holder shall earlier provide written notice to the Company that the Holder desires that this Warrant expire unexercised. If this Warrant is automatically exercised, the Company shall notify the Holder of the automatic exercise as soon as reasonably practicable, and the Holder shall surrender the Warrant to the Company in accordance with the terms hereof.

## 5. Delivery of Warrant Shares.

(a) Upon exercise of this Warrant, the Company shall promptly (but in no event later than two (2) Trading Days after the Exercise Date or such shorter period as shall constitute then applicable “regular way” settlement), upon the request of the Holder, cause the Transfer Agent to credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with The Depository Trust Company (“DTC”) through its Deposit Withdrawal Agent Commission system or if the Transfer Agent is not participating in the Fast Automated Securities Transfer Program (the “FAST Program”) or if the certificates are required to bear a legend regarding restriction on transferability, issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. The Holder, or any natural person or legal entity (each, a “Person”) so designated by the Holder to receive Warrant Shares, shall be deemed to have become the holder of record of such Warrant Shares as of the Exercise Date, irrespective of the date such Warrant Shares are credited to the Holder’s DTC account or the date of delivery of the certificates evidencing such Warrant Shares, as the case may be. While this Warrant remains outstanding, the Company shall maintain a transfer agent that participates in the FAST Program or any successor thereto.

(b) If by the close of the third (3rd) Trading Day after the Exercise Date, the Company fails to deliver to the Holder a certificate representing the required number of Warrant Shares in the manner required pursuant to Section 5(a) or fails to cause the Transfer Agent to credit the Holder’s DTC account for such number of Warrant Shares to which the Holder is entitled, and if after such second (2nd) Trading Day and prior to the receipt of such Warrant Shares, the Holder purchases (in an open market transaction or otherwise, provided such purchases shall be made in a commercially reasonable manner at prevailing market prices) shares of Common Stock to deliver in satisfaction of a sale by the Holder of all or a portion of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “Buy-In”), then the Company shall, within two (2) Trading Days after the Holder’s written request and in the Holder’s sole discretion, either (i) pay in cash to the Holder an amount equal to the Holder’s total purchase price (including commercially reasonable brokerage commissions, if any) for the shares of Common Stock so purchased, at which point the Company’s obligation to deliver such certificate (and to issue such Warrant Shares) or to cause the Holder’s DTC account to be credited for such number of Warrant Shares shall terminate or (ii) (x) pay cash to the Holder in an amount equal to the excess (if any) of Holder’s total purchase price (including commercially reasonable brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In (assuming such sale was executed on commercially reasonable terms at prevailing market prices) over the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the Closing Sale Price of a share of Common Stock on the Exercise Date and (y) at the option of the Holder, either promptly deliver to the Holder a certificate or certificates representing such Warrant Shares or reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded).

(c) To the extent permitted by law and subject to Section 5(b), the Company’s obligations to cause the Transfer Agent to issue and deliver Warrant Shares in accordance with and subject to the terms hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Subject to Section 5(b), nothing herein shall limit the Holder’s right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to timely deliver certificates representing shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

6. *Charges, Taxes and Expenses.* Issuance and delivery of this Warrant and of certificates for shares of Common Stock, if any, upon exercise of this Warrant shall be made without charge to the Holder for any issue, stamp, recording, transfer or similar taxes, or transfer agent fee or any other incidental tax or expense in respect of the issuance of such certificates, all of which taxes and expenses shall be paid by the Company; *provided, however*, that the Company shall not be required to pay any such taxes that may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liabilities that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

7. *Replacement of Warrant.* If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity (which at the option of the Company shall include posting of an open penalty surety bond satisfactory to the Company and holding the Company harmless), if requested by the Company. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to issue the New Warrant.

8. *Reservation of Warrant Shares.* The Company covenants that it will, at all times while this Warrant is outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 9). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and non-assessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed. The Company further covenants that it will not, without the prior written consent of the Holder, take any actions to increase the par value of the Common Stock at any time while this Warrant is outstanding.

9. *Certain Adjustments.* The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant (the "Number of Warrant Shares") are subject to adjustment from time to time as set forth in this Section 9.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock issued and outstanding on the Original Issue Date and in accordance with the terms of such stock on the Original Issue Date or as amended, that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares of Common Stock, (iii) combines its outstanding shares of Common Stock into a smaller number of shares of Common Stock or (iv) issues by reclassification of shares of capital stock any additional shares of Common Stock of the Company, then in each such case the Number of Warrant Shares shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately after such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately before such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, provided, however, that if such record date shall have been fixed and such dividend is not fully paid on the date fixed therefor, the Number of Warrant Shares shall be recomputed accordingly as of the close of business on such record date and thereafter the Number of Warrant Shares shall be adjusted pursuant to this paragraph as of the time of actual payment of such dividends. Any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination.

(b) Fundamental Transactions. If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the surviving entity, (ii) the Company effects any sale, transfer or disposition to another Person of all or substantially all of its assets in one transaction or a series of related transactions, (iii) pursuant to any tender offer or exchange offer (whether by the Company or another Person), holders of capital stock tender shares representing more than 50% of the voting power of the capital stock of the Company and the Company or such other Person, as applicable, accepts such tender for payment, (iv) the Company consummates a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person

whereby such other Person acquires more than the 50% of the voting power of the capital stock of the Company or (v) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by [Section 9\(a\)](#) above) (in any such case, a “**Fundamental Transaction**”), then following such Fundamental Transaction the Holder shall have the right to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares (in the case of clause (iii) above, assuming it had tendered, and the offeror had accepted, such Warrant Shares) then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the “**Alternate Consideration**”). The Company shall not effect any Fundamental Transaction in which the Company is not the surviving entity or the Alternate Consideration includes securities of another Person unless (i) the Alternate Consideration is solely cash and the Company provides for the simultaneous “cashless exercise” of this Warrant in full pursuant to [Section 10](#) below or (ii) prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or other Person (including any purchaser of assets of the Company) shall assume the obligation to deliver to the Holder such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to receive, and the other obligations under this Warrant. The provisions of this paragraph (b) shall similarly apply to subsequent transactions analogous of a Fundamental Transaction type.

(c) Exercise Price. Simultaneously with any adjustment to the Number of Warrant Shares pursuant to [Section 9](#) the Exercise Price shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased Number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment. Notwithstanding the foregoing, in no event may the Exercise Price be adjusted below the par value of the Common Stock then in effect.

(d) Calculations. All calculations under this [Section 9](#) shall be made to the nearest one-hundredth of one cent or the nearest share, as applicable.

(e) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this [Section 9](#), the Company at its expense will, at the written request of the Holder, promptly compute such adjustment, in good faith, in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder.

(f) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice of such transaction at least ten (10) days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. In the event such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall (on the same time frame set forth in the immediately prior sentence) offer the Holder the ability to execute a confidentiality agreement related thereto sufficient to allow Holder the ability to receive such notice, and the Company shall deliver such notice immediately upon execution of such confidentiality agreement. In addition, if while this Warrant is outstanding, the Company authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction contemplated by [Section 9\(b\)](#), other than a Fundamental Transaction under clause (iii) of [Section 9\(b\)](#), then the Company shall deliver to the Holder a notice of such Fundamental Transaction at least ten (10) days prior to the date such Fundamental Transaction is consummated except that, if such notice and the contents thereof shall be deemed to constitute material non-public information, delivery shall be conditioned on Holder entering into a confidentiality agreement as described above. The exercise of this Warrant may, at the election of the Holder, be conditioned so as to occur contemporaneously with a Fundamental Transaction.

10. *Payment of Cashless Exercise Price.* Notwithstanding anything contained herein to the contrary, the Holder may, in its sole discretion, satisfy its obligation to pay the Exercise Price through a “cashless exercise,” in which event the Company shall issue to the Holder the number of Warrant Shares in an exchange of securities effected pursuant to Section 3(a)(9) of the Securities Act as determined as follows:

$$X = Y [(A-B)/A]$$

where:

“X” equals the number of Warrant Shares to be issued to the Holder;

“Y” equals the total number of Warrant Shares with respect to which this Warrant is then being exercised;

“A” equals the Closing Sale Price per share of Common Stock as of the Trading Day on the date immediately preceding the Exercise Date; and

“B” equals the Exercise Price per Warrant Share then in effect on the Exercise Date.

For purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in such a “cashless exercise” transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the Original Issue Date (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise). In the event that a registration statement registering the issuance of Warrant Shares is, for any reason, not effective at the time of exercise of this Warrant, then this Warrant may only be exercised through a cashless exercise, as set forth in this Section 10. Except as set forth in Section 5(b) (Buy-In remedy) and Section 12 (payment of cash in lieu of fractional shares), in no event will the exercise of this Warrant be settled in cash. For the avoidance of doubt, in the event that a registration statement registering the issuance of the Warrant Shares is, for any reason, not effective at the time of exercise of this Warrant, then a cashless exercise pursuant to this Section 10 in exchange for unregistered Warrant Shares in accordance with Section 3(a)(9) of the Securities Act shall be permitted.

11. *[Reserved]*.

12. *No Fractional Shares.* No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the Closing Sale Price) for any such fractional shares.

13. *Notices.* Any and all notices or other communications or deliveries hereunder (including, without limitation, any Exercise Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via confirmed e-mail prior to 5:30 P.M., New York City time, on a Trading Day so long as the sender of an e-mail has not received an automated notice of delivery failure from the proposed recipient’s computer server, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via confirmed e-mail on a day that is not a Trading Day or later than 5:30 P.M., New York City time, on any Trading Day so long as the sender of an e-mail has not received an automated notice of delivery failure from the proposed recipient’s computer server, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (iv) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery. The addresses and e-mail addresses for such communications shall be:

If to the Company:

REGENXBIO Inc.  
9804 Medical Center Drive,  
Rockville, MD 20850  
Attention: Chief Legal Officer

with a copy (which shall not constitute notice) to:

Covington & Burling LLP,  
One CityCenter, 850 Tenth Street, NW,  
Washington, D.C. 20001,  
Attention: Kerry S. Burke (email: [\*\*\*]) and Matthew C. Franker (email: [\*\*\*])

If to the Holder, to its address or e-mail address set forth herein or on the books and records of the Company.

Or, in each of the above instances, to such other address or e-mail address as the recipient party has specified by written notice given to each other party at least five (5) days prior to the effectiveness of such change.

#### 14. *Registration Rights.*

(a) The Company agrees that, within 60 calendar days after the Original Issue Date (the “**Filing Deadline**”), it will file with the Securities and Exchange Commission (the “**SEC**”) (at its sole cost and expense) a registration statement registering the resale of all of the Warrant Shares (the “**Registration Statement**”), and it shall use its commercially reasonable efforts to have the Registration Statement declared effective as soon as practicable after the filing thereof, but no later than the earlier of (1) the 120th calendar day after the Original Issue Date (or the 150th calendar day if the SEC notifies (orally or in writing) the Company that it will “review” the Registration Statement) and (2) the fifth Business Day after the date the Company is notified in writing by the SEC that the Registration Statement will not be “reviewed” or will not be subject to further review (the “**Effectiveness Date**”). The Company shall provide a draft of the Registration Statement to the Holder for review at least four Business Days in advance of the date of filing the Registration Statement with the SEC (the “**Filing Date**”), and the Holder shall provide any comments on the Registration Statement to the Company no later than the day immediately preceding the Filing Date. The Company shall promptly notify the Holder of the effectiveness of the Registration Statement. The Company agrees to cause such Registration Statement to remain effective, except for such times as the Company is permitted hereunder to suspend the use of the prospectus forming part of the Registration Statement, until the earliest of (i) the first anniversary of the Original Issue Date; (ii) the date on which the Holder ceases to hold any Warrant or Warrant Shares, or (iii) the first date on which the Holder can sell all of its Warrant and Warrant Shares under Rule 144 under the Securities Act without volume or manner of sale limitations and without the requirement for the Company to be in compliance with the current public information required by Rule 144(c)(2) under the Securities Act. The Holder agrees to disclose its beneficial ownership as determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”) to the Company upon request to assist it in making the determination described above. In no event shall the Holder be identified as a statutory underwriter in the Registration Statement unless requested by the SEC; provided, that if the SEC requests that the Holder be identified as a statutory underwriter in the Registration Statement, the Holder will have an opportunity to withdraw its Warrant Shares from the Registration Statement. Notwithstanding the foregoing, if the SEC prevents the Company from including any or all of the shares proposed to be registered under the Registration Statement due to limitations on the use of Rule 415 under the Securities Act for the resale of the Warrant Shares by the Holder or otherwise, such Registration Statement shall register for resale such number of Warrant Shares which is equal to the maximum number of Warrant Shares as is permitted by the SEC. The Company’s obligations to include the Warrant Shares pursuant to this Warrant for resale in the Registration Statement are contingent upon the Holder furnishing in writing to the Company such information regarding the Holder, the securities of the Company held by the Holder and the intended method of disposition of such Warrant Shares as shall be reasonably requested by the Company to effect the registration of such Warrant Shares, and shall execute such documents in connection with such registration as the Company may reasonably request that are customary of a selling stockholder in similar situations. For purposes of clarification, any failure by the Company to file the Registration Statement by the Filing Deadline or to effect such Registration Statement by the Effectiveness Date shall not otherwise relieve the Company of its obligations to file or effect the Registration Statement set forth in this Section 14 of this Warrant. For as long as the Registration Statement shall remain effective pursuant to this Section 14(a) of this Warrant, the Company will use commercially

reasonable efforts to (1) qualify the Warrant Shares for listing on the Nasdaq, and (2) update or amend the Registration Statement as necessary to include the Warrant Shares. For as long as the Holder holds any Warrant or Warrant Shares, the Company will use commercially reasonable efforts to (A) make and keep public information available, as those terms are understood and defined in Rule 144 under the Securities Act, (B) file in a timely manner all reports and other documents with the SEC required under the Exchange Act, as long as the Company remains subject to such requirements, and (C) provide all customary and reasonable cooperation necessary, in each case, to enable the undersigned to resell the Warrant Shares pursuant to the Registration Statement or Rule 144 under the Securities Act, as applicable.

(b) Notwithstanding anything to the contrary contained herein, the Company may delay or postpone filing of such Registration Statement, and from time to time require the Holder not to sell under the Registration Statement or suspend the use or effectiveness of any such Registration Statement, if the board of directors of the Company determines in good faith that either in order for the Registration Statement to not contain a material misstatement or omission, an amendment thereto would be needed, or if such filing or use could materially affect a bona fide business or financing transaction of the Company or would require premature disclosure of information that could materially adversely affect the Company (each such circumstance, a **"Suspension Event"**); provided, that, (i) the Company shall not so delay filing or so suspend the use of the Registration Statement on more than two occasions or for a period of more than 45 consecutive days or more than a total of 60 calendar days, in each case in any 360-day period and (ii) the Company shall use commercially reasonable efforts to make such Registration Statement available for the sale by the undersigned of such securities as soon as practicable thereafter.

(c) At its expense, the Company shall advise the Holder within two Business Days: (i) when a Registration Statement or any post-effective amendment thereto has become effective; (ii) of the issuance by the SEC of any stop order suspending the effectiveness of any Registration Statement or the initiation of any proceedings for such purpose; (iii) of the receipt by the Company of any notification with respect to the suspension of the qualification of the Warrant Shares included therein for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; and (iv) subject to the provisions in this Warrant, of the occurrence of any event that requires the making of any changes in any Registration Statement or prospectus so that, as of such date, the statements therein are not misleading and do not omit to state a material fact required to be stated therein or necessary to make the statements therein (in the case of a prospectus, in the light of the circumstances under which they were made) not misleading. Upon receipt of any written notice from the Company (which notice shall not contain any material non-public information regarding the Company) of the happening of any of the foregoing or of a Suspension Event during the period that the Registration Statement is effective or if as a result of a Suspension Event the Registration Statement or related prospectus contains any untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made (in the case of the prospectus) not misleading, the undersigned agrees that (1) it will immediately discontinue offers and sales of the Warrant Shares under the Registration Statement (excluding, for the avoidance of doubt, sales conducted pursuant to Rule 144 under the Securities Act) until the undersigned receives copies of a supplemental or amended prospectus (which the Company agrees to promptly prepare) that corrects the misstatement(s) or omission(s) referred to above and receives notice that any post-effective amendment has become effective or unless otherwise notified by the Company that it may resume such offers and sales, and (2) it will maintain the confidentiality of any information included in such written notice delivered by the Company except (A) for disclosure to the Holder's employees, agents and professional advisers who need to know such information and are obligated to keep it confidential, (B) for disclosures to the extent required in order to comply with reporting obligations to its limited partners who have agreed to keep such information confidential and (C) as required by law or subpoena. The Company shall use its commercially reasonable efforts to obtain the withdrawal of any order suspending the effectiveness of any Registration Statement as soon as reasonably practicable. Upon the occurrence of any event contemplated in clauses (i) through (iv) above, except for such times as the Company is permitted hereunder to suspend, and has suspended, the use of a prospectus forming part of a Registration Statement, the Company shall use its commercially reasonable efforts to as soon as reasonably practicable prepare a post-effective amendment to such Registration Statement or a supplement to the related prospectus, or file any other required document so that, as thereafter delivered to purchasers of the Warrant Shares included therein, such prospectus will not include any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

15. *Miscellaneous.*

(a) No Rights as a Stockholder. The Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or, except as provided herein, receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive, except as provided herein, dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

(b) Authorized Shares. Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (a) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable the Company to perform its obligations under this Warrant.

(c) Successors and Assigns. Subject to compliance with applicable securities laws, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder, except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant. This Warrant may be amended only in writing signed by the Company and the Holder, or their successors and assigns.

(d) Amendment and Waiver. Except as otherwise provided herein, the provisions of the Warrants may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

(e) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

(f) Tax Treatment of Cashless Exercise. The Holder and the Company intend that any cashless exercise of the Warrant for common stock of the Company be treated as a "reorganization" within the meaning of Section 368(a) of the Internal Revenue Code of 1986, such treatment described in this sentence, the "**Intended Tax Treatment**". Unless required otherwise by a change in applicable law after the date of this Warrant or a good faith resolution of a tax audit or administrative or judicial tax proceeding, neither the Holder nor the Company shall file any relevant income tax returns or take any other tax position inconsistent with the Intended Tax Treatment and each party shall notify the other party of any challenge to such treatment by a taxing authority.

(g) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN

(INCLUDING WITH RESPECT TO THE ENFORCEMENT OF THE WARRANT OR ANY OF THE DOCUMENTS DELIVERED HEREUNDER), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON AT THE ADDRESS IN EFFECT FOR NOTICES TO IT AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

(h) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(i) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the Company and the Holder will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

REGENXBIO INC.

By: \_\_\_\_\_  
Name:  
Title:

*[Signature Page to Warrant]*

**SCHEDULE 1**

**FORM OF EXERCISE NOTICE**

[To be executed by the Holder to purchase Warrant Shares under the Warrant]

Ladies and Gentlemen:

- (1) The undersigned is the Holder of Warrant No. \_\_\_\_ (the "Warrant") issued by REGENXBIO Inc., a Delaware corporation (the "Company"). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.
- (2) The undersigned hereby exercises its right to purchase Warrant Shares pursuant to the Warrant.
- (3) The Holder intends that payment of the Exercise Price shall be made as (check one):
- "Cashless Exercise" under Section 10 of the Warrant (assumed election absent express election to the contrary)
  - Cash Exercise
- (4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$ \_\_\_\_\_ in immediately available funds to the Company in accordance with the terms of the Warrant.
- (5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant. The Warrant Shares shall be delivered to the following DWAC Account Number:

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

## COVINGTON

BEIJING BOSTON BRUSSELS DUBAI FRANKFURT  
JOHANNESBURG LONDON LOS ANGELES NEW YORK  
PALO ALTO SAN FRANCISCO SEOUL SHANGHAI WASHINGTON

Covington & Burling LLP  
One CityCenter  
850 Tenth Street, NW  
Washington, DC 20001-4956  
T +1 202 662 6000

June 13, 2025

REGENXBIO Inc.  
9804 Medical Center Drive  
Rockville, Maryland 20850

Ladies and Gentlemen:

We have acted as counsel to REGENXBIO Inc., a Delaware corporation (the “*Company*”), in connection with the registration by the Company under the Securities Act of 1933 (the “*Securities Act*”) of the resale by the holder thereof of up to 268,096 shares of common stock, \$0.0001 par value per share (the “*Common Stock*”), of the Company (the “*Shares*”), pursuant to the registration statement on Form S-3 filed with the United States Securities and Exchange Commission (the “*Commission*”) on the date hereof (the “*Registration Statement*”). The Shares are issuable upon the exercise of the Warrant, dated as of May 16, 2025 (the “*Warrant*”).

We have reviewed:

- (i) the Registration Statement;
- (ii) the Warrant; and
- (iii) such other corporate records, certificates and documents, and such questions of law, as we have considered necessary or appropriate for the purposes of this opinion.

We have assumed that all signatures are genuine, that all documents submitted to us as originals are authentic and that all copies of documents submitted to us conform to the originals. We have assumed that any Shares issued upon exercise of the Warrant will be duly registered on the books of the transfer agent and registrar in the name and on behalf of the respective owners thereof and that the Company will comply with applicable notice requirements regarding uncertificated shares provided under the Delaware General Corporation Law (the “*DGCL*”). We have assumed further the accuracy of the representations of the Company, and compliance by the Company with the covenants, set forth in the Warrant. We have assumed further that the information and representations and warranties contained in the agreements, instruments, records, certificates and other documents we reviewed were true, accurate and complete as of their stated date and are true, accurate and complete as of the date of this letter.

We have relied as to certain matters on information obtained from public officials, officers of the Company and other sources believed by us to be responsible. We express no opinion to the extent that, notwithstanding the Company’s current reservation of shares of Common Stock, future issuances of securities of the Company, including the Shares, and anti-dilution adjustments

REGENXBIO Inc.

June 13, 2025

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with respect to outstanding securities of the Company, including the Warrant, may cause the Warrant to be exercisable in the future for more shares of Common Stock than the number of Shares being registered pursuant to the Registration Statement. We also have assumed that the Exercise Price (as defined in the Warrant) will not be adjusted to an amount below the par value per share of the Common Stock.

Based upon the foregoing, and subject to the qualifications set forth herein, we are of the opinion that the Shares initially issuable upon exercise of the Warrant have been duly authorized and reserved for issuance and, when issued and paid for upon exercise of the Warrant, including receipt by the Company of full payment therefor, in accordance with the terms of the Warrant, will be validly issued, fully paid and non-assessable.

We are members of the bar of the District of Columbia and the State of New York. We do not express any opinion herein on any laws other than the Delaware General Corporation Law.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement. We also hereby consent to the reference to our firm under the heading "Legal Matters" in the prospectus constituting part of the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act.

Very truly yours,

/s/ Covington & Burling LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of REGENXBIO Inc. of our report dated March 13, 2025 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in REGENXBIO Inc.'s Annual Report on Form 10-K for the year ended December 31, 2024. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP  
Washington, District of Columbia  
June 13, 2025

**Calculation of Filing Fee Tables**

Form S-3  
(Form Type)

REGENXBIO Inc.  
(Exact Name of Registrant as Specified in its Charter)

**Table 1: Newly Registered and Carry-Forward Securities**

	Security Type	Security Class Title	Fee Calculation Rule	Amount Registered <sup>(1)</sup>	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
<b>Secondary Offering</b>								
Fees to be Paid	Equity	Common Stock, \$0.0001 par value per share (“Common Stock”) <sup>(2)</sup>	457(c)	268,096	\$14.92 <sup>(3)</sup>	\$3,999,992.32 <sup>(3)</sup>	0.00015310	\$612.40
Fees Previously Paid								—
		Total Offering Amount				\$3,999,992.32	0.00015310	\$612.40
		Total Fees Previously Paid						—
		Total Fee Offsets						—
		Net Fee Due						\$612.40

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement shall also cover any additional shares of the registrant’s Common Stock that become issuable in respect of such securities by reason of any stock dividend, stock split, recapitalization or other similar transaction.
- (2) Represents 268,096 shares of Common Stock registered for resale by the selling stockholder that may be issued upon the exercise of warrants at an exercise price of \$14.92 per share.
- (3) Estimated solely for purposes of calculating the amount of the registration fee pursuant to Rule 457(g) under the Securities Act, based on the applicable exercise price of the Warrants.