

REGENXBIO Inc.
Form 424B5
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Registration No. 333-226691

The information in this preliminary prospectus supplement and the accompanying prospectus is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated August 8, 2018

Preliminary Prospectus Supplement

(To Prospectus dated August 8, 2018)

\$175,000,000

Common Stock

We are offering shares of our common stock with an aggregate public offering price of approximately \$175,000,000 pursuant to this prospectus supplement. Our common stock is listed for trading on The Nasdaq Global Select Market under the symbol **RGNX**. On August 7, 2018, the closing sales price of our common stock on The Nasdaq Global Select Market was \$70.80 per share.

We are an emerging growth company under the federal securities laws and are subject to reduced public company reporting requirements.

Investing in our common stock involves significant risks. Please carefully consider the risks discussed in **Risk Factors** beginning on page S-8 of this prospectus supplement and in our filings with the Securities and Exchange Commission, or SEC, that are incorporated by reference in this prospectus supplement before making a decision to invest in our common stock.

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts and commissions to be paid by us ⁽¹⁾	\$	\$
Proceeds, before expenses, to us	\$	\$

(1) We have agreed to reimburse the underwriters for certain FINRA-related offering expenses. See Underwriters. We have granted the underwriters an option to purchase up to an additional _____ shares of our common stock with an aggregate public offering price of approximately \$26,250,000 at the public offering price, less the underwriting discount, within 30 days from the date of this prospectus supplement.

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

The underwriters expect to deliver the shares of common stock against payment on or about August _____, 2018.

Morgan Stanley

BofA Merrill Lynch

Barclays

Raymond James

The date of this prospectus supplement is August _____, 2018.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering of common stock and updates the information contained in the accompanying prospectus and the documents incorporated by reference herein and therein. The second part is the accompanying prospectus, which provides more general information, some of which does not apply to this offering. To the extent the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus or documents previously filed with the SEC that are incorporated by reference herein, the information in this prospectus supplement will supersede such information. For a more detailed understanding of an investment in our common stock, you should read both this prospectus supplement and the accompanying prospectus, together with additional information described under the heading **Where You Can Find More Information**.

This prospectus supplement is part of an automatic shelf registration statement on Form S-3 that we filed with the SEC on August 8, 2018. Under the shelf registration process, we may from time to time offer and sell any combination of the securities described in the accompanying prospectus in one or more offerings. In addition, under our shelf registration statement certain of our stockholders may from time to time offer and sell up to an aggregate of 5,057,458 shares of our common stock in one or more offerings.

Neither we nor the underwriters have authorized anyone to provide you with information that is different or in addition to that contained or incorporated by reference in this prospectus supplement, the accompanying prospectus or any free writing prospectus prepared by us or on our behalf. Neither we nor the underwriters take any responsibility for, and can provide no assurance as to the reliability of, any information that others may give. Neither we nor the underwriters are making an offer to sell or soliciting an offer to buy our common stock under any circumstance in any jurisdiction where the offer or solicitation is not permitted. You should not assume that the information in this prospectus supplement, the accompanying prospectus and any free writing prospectus is accurate as of any date other than the respective date of each of those documents, or that any information in documents that we have incorporated by reference is accurate as of any date other than the date of the document incorporated by reference, regardless of the time of delivery of this prospectus supplement or any sale of shares of our common stock hereunder. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus supplement, the accompanying prospectus, and the information incorporated herein and therein by reference includes trademarks, service marks and trade names owned by us or other companies. NAV and REGENXBIO are our registered trademarks. All trademarks, service marks and trade names included or incorporated by reference into this prospectus supplement or the accompanying prospectus are the property of their respective owners.

Unless the context indicates otherwise, in this prospectus supplement and the accompanying prospectus the terms REGENXBIO, we, us and our refer to REGENXBIO Inc., a Delaware corporation.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, and the information incorporated herein and therein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, or the Exchange Act, which are subject to the safe harbor created by those sections for such statements. The words believe, may, will, estimate, continue, and design, intend, expect, could, plan, potential, predict, seek, should, would or the negative version of similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, strategy, short- and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties, assumptions and other important factors, including those described in this prospectus supplement, the accompanying prospectus and the documents incorporated herein and therein by reference, particularly in the sections of such documents titled Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations. In light of these risks, uncertainties, assumptions and other factors, the forward-looking events and circumstances discussed in this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein may not occur, and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements.

Forward-looking statements include, but are not limited to, statements about:

the timing of enrollment, commencement and completion and the success of clinical trials conducted by us, our licensees and our partners;

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 ability to obtain and maintain regulatory approval of our product candidates, and the labeling for any approved products;

the scope, progress, expansion and costs of developing and commercializing our product candidates;

our ability to obtain and maintain intellectual property protection for our product candidates and 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 product candidates;

our ability to establish and maintain development partnerships;

our expectations regarding our expenses and revenue;

our expectations regarding regulatory developments in the United States and foreign countries; and

the use or sufficiency of our cash and cash equivalents and needs for additional financing.

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Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. Any forward-looking statement made by us in this prospectus supplement, the accompanying prospectus, and the information incorporated herein and therein by reference speaks only as of the date of the respective document. Except as required by law, we disclaim any duty to update any of these forward-looking statements after the date such statements are made, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

You should read this prospectus supplement, the accompanying prospectus, the information incorporated herein and therein by reference, and the documents that have been filed as exhibits to the registration statement of which this prospectus supplement is a part completely and with the understanding that our actual future results may be materially different from what we expect.

All written and verbal forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We caution investors not to rely too heavily on the forward-looking statements we make or that are made on our behalf.

In addition, you should refer to the section of this prospectus supplement entitled **Risk Factors** as well as the **Risk Factors** disclosed in the documents we have incorporated by reference, for a discussion of other important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus supplement, the accompanying prospectus, or the information incorporated herein and therein will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties to which these forward-looking statements are subject, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

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PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained elsewhere in this prospectus supplement and the accompanying prospectus. It does not contain all of the information you should consider before making an investment decision. Before you decide to invest in our securities, you should read the entire prospectus supplement and the accompanying prospectus carefully, including the risk factors and the financial statements and related notes incorporated by reference herein and therein.

Company Overview

We are a leading clinical-stage biotechnology company seeking to improve lives through the curative potential of gene therapy. Our gene therapy product candidates are designed to deliver genes to cells to address genetic defects or to enable cells in the body to produce therapeutic proteins that are intended to impact disease. Through a single administration, our gene therapy product candidates are designed to provide long-lasting effects, potentially significantly altering the course of disease and delivering improved patient outcomes.

We are seeking to develop, manufacture, commercialize and license product candidates across multiple therapeutic areas and target organs while continuing to expand our proprietary gene delivery platform, which we call our NAV Technology Platform. We seek to accomplish this through a combination of our internal product development efforts and selective licensing to other leading biotechnology companies, which we refer to as NAV Technology Licensees. We and our NAV Technology Licensees are applying the NAV Technology Platform to develop a broad pipeline of product candidates in multiple therapeutic areas.

Our NAV Gene Therapy Product Candidates

Our gene therapy product candidates deliver genes to cells using adeno-associated virus, or AAV, vectors, which are non-replicating viral delivery vehicles that are not known to cause disease. Our product candidates all utilize viral vectors from our NAV Technology Platform, which consists of exclusive rights to AAV7, AAV8, AAV9, AAVrh10 and over 100 other novel AAV vectors, or NAV Vectors. We currently have exclusive rights to over 100 patents and patent applications worldwide covering our NAV Vectors, including composition of matter claims for AAV7, AAV8, AAV9 and AAVrh10, as well as methods for their manufacture and therapeutic uses. We believe this patent portfolio forms a strong foundation for our current programs and with our ongoing research and development, we expect to continue to expand this robust patent portfolio.

The foundation of our NAV Technology Platform was discovered in an effort to identify next generation AAV vectors that could overcome the limitations of earlier generation AAV vectors (AAV1 through AAV6). We believe the key benefits of NAV Vectors over earlier generation AAV vectors include:

higher gene expression;

longer-term gene expression;

broad and novel tissue selectivity;

lower immune response; and

improved manufacturability.

We have developed an internal pipeline of product candidates across the therapeutic areas of retinal, metabolic and neurodegenerative diseases. Below is a table summarizing our current internal development programs.

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Our lead product candidate RGX-314 is for the treatment of wet age-related macular degeneration, or wet AMD, a leading cause of total and partial vision loss in the United States, Europe and Japan. We began enrollment in the Phase I clinical trial for RGX-314 for the treatment of wet AMD in May 2017 and have completed dosing of three cohorts of six subjects each, a total of 18 subjects. We expect to complete dosing of a fourth cohort by the end of the fourth quarter of 2018 and initiate a Phase II trial in 2019.

We are developing RGX-501 for the treatment of homozygous familial hypercholesterolemia, or HoFH, a severe genetic disease characterized by premature and aggressive plaque buildup, life threatening coronary artery disease and aortic valve disease predominantly due to abnormalities in the function or expression of the low-density lipoprotein receptor. Enrollment in the Phase I/II clinical trial for RGX-501 began in March 2017. We have completed dosing of the first cohort of three subjects and have dosed three subjects in the second cohort, a total of six subjects. We expect to present additional data in the fourth quarter of 2018.

We are also developing product candidates to address the neurological symptoms of two severe genetic lysosomal storage diseases, Mucopolysaccharidosis Type I, or MPS I, and Mucopolysaccharidosis Type II, or MPS II. MPS I is caused by deficiency of α -L-iduronidase, or IDUA and MPS II is caused by deficiency of iduronate-2-sulfatase, or IDS, both of which are enzymes that are responsible for breakdown of cellular waste products. Deficiencies in these enzymes lead to a number of physical symptoms and patients with severe forms of these diseases also exhibit significant cognitive decline. The investigational new drug applications, or INDs, filed with the U.S. Food and Drug Administration, or FDA, for RGX-111 and RGX-121, our product candidates for MPS I and MPS II, respectively, are active. We expect to begin enrollment in a Phase I clinical trial for RGX-111 and a Phase I/II clinical trial for RGX-121 in the fourth quarter of 2018.

Interim Data Update for RGX-314

In our Phase I trial for RGX-314, 18 subjects with wet AMD received a single administration of RGX-314 across three cohorts (six participants in each cohort). To qualify for inclusion in the trial, participants were required to have a history of frequent anti-vascular endothelial growth factor, or VEGF, treatment (including at least four anti-VEGF injections in the eight months preceding trial enrollment) and a documented history of response to anti-VEGF therapy. The trial design included doses of 3×10^9 (Cohort 1), 1×10^{10} (Cohort 2) and 6×10^{10} (Cohort 3) genome copies, or GC, /eye. Subjects have been assessed every month to the six-month primary endpoint, with long-term follow-up continuing for 24 months. Below is a summary of the preliminary results of our Phase 1 trial as of July 27, 2018:

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Subjects have been followed for an average of 11 months for Cohort 1, nine months for Cohort 2 and six months for Cohort 3. Dose-dependent protein expression levels, dose-dependent reduction in anti-VEGF injections and maintenance of central retinal thickness, or CRT, by spectral domain optical coherence tomography, or SD-OCT, have been reported across all cohorts. Additionally, through month six, Best Corrected Visual Acuity, or BCVA, assessments for subjects in Cohort 3 have a mean improvement in visual acuity. Three subjects from Cohort 3 have been free of anti-VEGF injections since the administration of RGX-314.

RGX-314 was well-tolerated by all subjects with no reported drug-related adverse events, or AEs, or drug-related serious adverse events, or SAEs. The most common AEs in all dose cohorts were those assessed as mild (Grade 1, 83%) and there have been no observed immune responses, drug-related ocular inflammation or any post-surgical inflammation beyond what is expected following routine vitrectomy. Five SAEs that were not drug-related were reported among three subjects. Three SAEs are attributed to one subject in Cohort 1 and the events were assessed as not related to RGX-314. Five months after the administration of RGX-314, this subject was hospitalized after developing symptoms related to a pre-existing condition that led to the subject's death. One SAE was a procedure-related peripheral retinal detachment that occurred, and was repaired with a scleral buckle and resolved without significant sequelae. The other SAE was assessed as mild in severity with no relationship to RGX-314.

RGX-314 protein expression has been detected in all subjects treated to date. Dose-dependent increases in RGX-314 protein expression levels, or Protein Levels, as measured from aqueous samples by enzyme-linked immunosorbent assay, or ELISA, at approximately one month after administration of RGX-314, have been observed. The number of anti-VEGF injections required following the administration of RGX-314 through six months was lowest in Cohort 3. We compared the number of anti-VEGF injections each subject had received during the six months prior to their most recent anti-VEGF injection preceding their enrollment in the study to the number of anti-VEGF injections received in the six months following RGX-314 administration to understand how the frequency of anti-VEGF injections changed among subjects within each cohort. In Cohort 3, the mean number of anti-VEGF injections received following RGX-314 administration was reduced by 53% when compared to this prior history. Maintenance of CRT, as measured by SD-OCT, from baseline to six months, has been observed in the three dosing cohorts. In Cohort 3, the mean CRT decreased by -14 μm from baseline to six months, with this cohort also receiving fewer anti-VEGF injections on average than Cohorts 1 and 2. BCVA (as measured by Early Treatment Diabetic Retinopathy Study, or ETDRS, letters) from baseline to six months was maintained across all cohorts. Subjects in Cohort 3 experienced a mean gain of +8 ETDRS letters, with this cohort also receiving fewer anti-VEGF injections on average than Cohorts 1 and 2.

Positive signals from clinical measures in Cohort 3 at six months indicate that this may be a clinically meaningful dose which we expect to use in a Phase II trial for wet AMD. Protein Levels at one month after administration of RGX-314 have been highest in Cohort 3, with a mean level over 100 ng/ml. Through six months, the majority of subjects treated in Cohort 3 have required minimal or no anti-VEGF injections, with maintenance of CRT and BCVA assessments showing maintenance or improvements in visual acuity. Through six months, 50% of subjects treated from Cohort 3 were free of anti-VEGF intravitreal injections and have evidence of clinically meaningful measures in mean CRT (-21 μm) and mean BCVA (+8 ETDRS letters) at six months versus baseline and generally higher aqueous protein expression levels, as measured at one month.

Based on RGX-314 being well-tolerated and the dose-dependent effects observed on protein expression, reductions in anti-VEGF injections and improvements in visual acuity, we plan to evaluate the potential benefits of a higher dose of RGX-314. Based on an amendment filed with the FDA, we are cleared to proceed under the current IND with the initiation of dosing of an additional cohort (six participants) at a dose of 1.6×10^{11} GC/eye (Cohort 4) and the first subject in Cohort 4 has been dosed.

We plan to initiate a Phase II trial for RGX-314 in 2019. Final determination of the study design is under way and we expect to engage with regulatory agencies before the end of 2018.

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In our Phase I/II trial for HoFH, a total of six subjects with HoFH received a single administration of RGX-501 across two dose cohorts (three participants in each) at doses of 2.5×10^{12} (Cohort I) and 7.5×10^{12} (Cohort II) GC/kg body weight, respectively. Below is a summary of the preliminary results of our Phase I/II trial as of July 27, 2018:

Subjects have been followed for an average of 63 weeks for Cohort I and 23 weeks for Cohort II. As of July 27, 2018, there have been four SAEs reported during the 52-week active study period, two of which were reported as drug-related. As previously reported in January 2018, one subject in Cohort I experienced a mild transitory activation of the innate immune system accompanied by hypotension and elevation in transaminases approximately 22 hours post dosing that resolved within a day. A second subject in Cohort II experienced transient, asymptomatic elevation in transaminases with a peak ALT of 1469 IU/L. This subject was briefly hospitalized to manage the transaminases and to perform additional assessments. All three subjects in Cohort II experienced an elevation in transaminases 4-6 weeks post-dosing. The peak ALTs were 165, 388, and 1469 IU/L in the three subjects. All three subjects were asymptomatic and responded rapidly to the initiation of prednisone followed by a slow taper, with normalization of the transaminases.

At 12 weeks, the three subjects in Cohort I did not show a clinically meaningful change in LDL-C levels. We believe that the ability to assess LDL-C levels at 12 weeks in the three subjects in Cohort II may be confounded by the potential effects on the liver and the resulting steroid therapy.

After review of the interim data from both cohorts with an independent Data Safety Monitoring Board, or DSMB, a protocol amendment is expected to be submitted to regulatory agencies that includes changes such as introduction of steroid prophylaxis and the primary evaluation of LDL-C at a later time point, such as 26 weeks, to ensure that steroid therapy has been discontinued. Based on the protocol amendment, we expect Cohort II to be expanded with additional subjects, and include steroid prophylaxis. A third dose cohort is planned, also including steroid prophylaxis, and will be initiated after the additional subjects in Cohort II reach approximately 12 weeks and an independent DSMB review is completed.

Commercial Licenses to NAV Technology Licensees

We sublicense our NAV Technology Platform to third parties in order to develop and bring to market NAV gene therapy treatments, or NAV Gene Therapy, for a range of severe diseases with significant unmet medical needs. Sublicensing allows us to maintain our internal product development focus on our core disease indications and therapeutic areas while still expanding the NAV Gene Therapy pipeline, developing a greater breadth of treatments for patients, providing additional technological and potential clinical proof-of-concept for our NAV Technology Platform, and creating potential additional revenue. Each sublicense specifies the vector or vectors and disease indication or indications as well as whether the sublicense is exclusive or non-exclusive.

As of June 30, 2018, our NAV Technology Licensees had 12 clinical stage programs using NAV Vectors. The chart below provides an overview of the development status of the programs of our NAV Technology Licensees.

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Our Strategy

Our mission is to improve lives through the curative potential of gene therapy. We are seeking to develop, manufacture, commercialize and license product candidates across multiple therapeutic areas and target organs while continuing to expand our NAV Technology Platform. To achieve our mission, we are pursuing the following strategies:

apply our proprietary, next generation AAV vector technology to develop *in vivo* gene therapies for patients;

focus on rapidly advancing our internal lead proprietary development programs in retinal, metabolic and neurodegenerative diseases;

establish gene therapy franchises in and beyond our current core therapeutic areas of retinal, metabolic and neurodegenerative diseases;

further grow the potential of our NAV Technology Platform through strategic in-licensing and sublicensing of new programs;

leverage the NAV Technology Platform in the expression of therapeutic proteins, antibodies and gene editing; and

maintain and grow our extensive intellectual property portfolio.

Company Information

We were formed on July 16, 2008 as ReGenX, LLC, a Delaware limited liability company, and we were subsequently renamed ReGenX Biosciences, LLC on December 22, 2009. On September 16, 2014, we underwent a corporate reorganization pursuant to which we were converted into a Delaware corporation under the name REGENXBIO Inc. Our principal offices are located at 9600 Blackwell Road, Suite 210, Rockville, Maryland 20850, and our telephone number is (240) 552-8181. Our website address is www.regenxbio.com. Our website and the information contained on, or that can be accessed through, the website is not part of this prospectus supplement or the accompanying prospectus.

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Issuer	REGENXBIO Inc.
Common stock offered by us	shares of our common stock with an aggregate public offering price of approximately \$175,000,000.
Underwriters option to purchase additional shares	The underwriters have the option to purchase up to an additional shares of our common stock with an aggregate public offering price of approximately \$26,250,000, which they may exercise, in whole or in part, for a period of 30 days from the date of this prospectus supplement.
Common stock to be outstanding immediately after this offering	shares, or shares if the underwriters option to purchase additional shares is exercised in full.
Use of proceeds	We estimate that the net proceeds from this offering will be approximately \$ million, or approximately \$ million if the underwriters exercise in full their option to purchase additional shares, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from the offering to: (i) advance our RGX-314 program, including expansion of the Phase I clinical trial with an additional dose cohort, initiation of a Phase II clinical trial and potential future development of expanded indications; (ii) fund development of RGX-501, including continued dose-escalation studies in our Phase I/II trial; (iii) fund the Phase I and Phase I/II clinical trials for RGX-111 and RGX-121, respectively; (iv) fund the conduct of preclinical studies to support the filing an IND for an additional internal program in 2019; (v) further build our manufacturing processing and analytics capabilities to support our ongoing and anticipated product development efforts, and in anticipation of potential registration studies for our lead product candidates; (vi) continue the development of internal early-stage research and development infrastructure to support other retinal, metabolic and neurodegenerative preclinical programs and to advance additional product candidates into clinical development; (vii) opportunistically grow the pipeline of new product candidates through in-licenses or potential acquisitions; and (viii) establish our initial commercial infrastructure in anticipation of future

potential commercial launches.

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	See Use of Proceeds on page S-10 of this prospectus supplement.
Risk factors	Investing in our common stock involves significant risks. See Risk Factors beginning on page S-9 of this prospectus supplement.
Nasdaq Global Select Market listing	Our common stock is listed on The Nasdaq Global Select Market under the symbol RGNX.

Outstanding Shares

The number of shares of our common stock to be outstanding immediately after this offering, as stated above, is based on 32,274,740 shares outstanding as of June 30, 2018, and excludes as of that date:

5,445,236 shares of common stock issuable upon the exercise of options with a weighted average exercise price of \$15.61;

39,500 shares issuable upon vesting of restricted stock units; and

2,236,302 shares of common stock reserved for issuance under our 2015 Equity Incentive Plan and 186,752 shares reserved for issuance under our 2015 Employee Stock Purchase Plan.

Except as otherwise indicated, all information in the prospectus supplement, including the number of shares of common stock outstanding immediately after this offering, excludes the shares referenced in the bullets above and assumes no exercise by the underwriters of their option to purchase additional shares of common stock from us within 30 days of the date of this prospectus supplement.

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*An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks described below and discussed under the section captioned **Risk Factors** in Part II, Item 1A of our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, which is incorporated by reference in this prospectus supplement and the accompanying prospectus in its entirety, together with other information in this prospectus supplement, the accompanying prospectus, and the information and documents incorporated by reference that we have authorized for use in connection with this offering. If any of these risks actually occur, our business, financial condition, results of operations or cash flows could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.*

Risks Related to Our Common Stock and This Offering

As an investor participating in this offering, you will experience immediate substantial dilution.

The price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock outstanding prior to this offering. As a result, investors purchasing common stock in this offering will experience dilution to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock. After giving effect to the sale of _____ shares of our common stock in this offering at the public offering price of \$ _____ per share and based on our net tangible book value as of June 30, 2018 of \$9.83 per share, if you purchase shares of common stock in this offering you will suffer substantial and immediate dilution of \$ _____ per share in the net tangible book value of the common stock. The future exercise of outstanding options and vesting of restricted stock units will result in further dilution of your investment. See the section entitled **Dilution** below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

Our management will have broad discretion over the actual amounts and timing of the expenditures of the proceeds we receive in this offering and might not apply the proceeds in ways that enhance our operating results or increase the value of your investment.

We intend to use the net proceeds from the offering to: (i) advance our RGX-314 program, including expansion of the Phase I clinical trial with an additional dose cohort, initiation of a Phase II clinical trial and potential future development of expanded indications; (ii) fund development of RGX-501, including continued dose-escalation studies in our Phase I/II trial; (iii) fund the Phase I and Phase I/II clinical trials for RGX-111 and RGX-121, respectively; (iv) fund the conduct of preclinical studies to support the filing an IND for an additional internal program in 2019; (v) further build our manufacturing processing and analytics capabilities to support our ongoing and anticipated product development efforts, and in anticipation of potential registration studies for our lead product candidates; (vi) continue the development of internal early-stage research and development infrastructure to support other retinal, metabolic and neurodegenerative preclinical programs and to advance additional product candidates into clinical development; (vii) opportunistically grow the pipeline of new product candidates through in-licenses or potential acquisitions; and (viii) establish our initial commercial infrastructure in anticipation of future potential commercial launches. Our management will have broad discretion as to the actual amounts and timing of the expenditures of the net proceeds from this offering, and you will be relying on the judgment of our management regarding the application of these proceeds. Our management might not apply the net proceeds of this offering in ways that enhance our operating results or increase the value of your investment. Additionally, until the net proceeds we receive are used, they may be placed in investments that do not produce income or that lose value. See **Use of Proceeds** located elsewhere in this prospectus supplement.

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USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately \$ million, or approximately \$ million if the underwriters exercise in full their option to purchase additional shares, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from the offering to:

- (i) advance our RGX-314 program, including expansion of the Phase I clinical trial with an additional dose cohort, initiation of a Phase II clinical trial and potential future development of expanded indications;
- (ii) fund development of RGX-501, including continued dose-escalation studies in our Phase I/II trial;
- (iii) fund the Phase I and Phase I/II clinical trials for RGX-111 and RGX-121, respectively;
- (iv) fund the conduct of preclinical studies to support the filing an IND for an additional internal program in 2019;
- (v) further build our manufacturing processing and analytics capabilities to support our ongoing and anticipated product development efforts, and in anticipation of potential registration studies for our lead product candidates;
- (vi) continue the development of internal early-stage research and development infrastructure to support other retinal, metabolic and neurodegenerative preclinical programs and to advance additional product candidates into clinical development;
- (vii) opportunistically grow the pipeline of new product candidates through in-licenses or potential acquisitions; and

(viii) establish our initial commercial infrastructure in anticipation of future potential commercial launches. The expected use of net proceeds of this offering represents our current intentions based upon our present plans and business conditions. The amounts we actually expend in these areas may vary significantly from our current intentions and will depend upon a number of factors, including success of our product candidate development and any potential commercialization efforts, cash generated from future operations, if any, and actual expenses to operate our business. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering. Accordingly, our management will have broad discretion in the application of the net proceeds, and investors will be relying on the judgment of our management regarding the application of the net proceeds of this offering.

Pending use of proceeds from this offering, we intend to invest the proceeds in a variety of capital preservation investments, including long-term and short-term, investment-grade, interest-bearing instruments.

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Table of Contents**CAPITALIZATION**

The following table sets forth our cash, cash equivalents and marketable securities and our capitalization as of June 30, 2018 on:

an actual basis; and

an as adjusted basis giving effect to the sale of _____ shares of our common stock offered in this offering, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The information in this table is illustrative only and our capitalization following the completion of this offering will be adjusted based on the actual public offering price and other terms of this offering determined at pricing. You should read this table in conjunction consolidated financial statements and the notes thereto included in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.

	As of June 30, 2018	
	Actual	As Adjusted
	(unaudited)	
	(dollars in thousands)	
Cash, cash equivalents and marketable securities ⁽¹⁾	\$ 306,289	\$
Stockholders' equity		
Preferred stock, par value \$0.0001 per share; 10,000,000 shares authorized and no shares issued and outstanding, actual and as adjusted		
Common stock; \$0.0001 par value per share; 100,000,000 shares authorized and 32,274,740 shares issued and outstanding, actual; _____ shares issued and outstanding, as adjusted	3	
Additional paid-in capital	386,110	
Accumulated other comprehensive loss	(771)	(771)
Accumulated deficit	(68,120)	(68,120)
Total stockholders' equity	317,222	
Total capitalization	\$ 317,222	\$

- (1) As of June 30, 2018, we had \$179.6 million of marketable securities that were classified as current assets and \$19.8 million of marketable securities that were classified as non-current assets. Marketable securities classified as non-current assets have maturity dates exceeding 12 months and are not expected to be sold prior to maturity for use in current operations.

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Table of Contents**DILUTION**

If you invest in our common stock in this offering, your interest will be diluted to the extent of the difference between the price per share that you pay and the net tangible book value per share of our common stock immediately after this offering.

As of June 30, 2018, our net tangible book value was \$317.2 million, or \$9.83 per share of common stock. Net tangible book value per share is equal to our total tangible assets, less total liabilities, divided by the number of outstanding shares of our common stock. Dilution with respect to net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering. After giving effect to the sale of shares of common stock in this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, at the public offering price of \$ per share, our as adjusted net tangible book value as of June 30, 2018 would have been approximately \$ million, or approximately \$ per share of common stock. This represents an immediate increase in net tangible book value of \$ per share to our existing stockholders and an immediate dilution of \$ per share to investors participating in this offering

The amounts in the table below assume no exercise by the underwriters of their option to purchase additional shares of common stock.

The following table illustrates this dilution on a per share basis:

Offering price per share	\$
Net tangible book value per share as of June 30, 2018	\$ 9.83
Increase in net tangible book value per share attributable to this offering	\$
As adjusted net tangible book value per share on June 30, 2018 after this offering	\$
Dilution per share to investors purchasing common stock in this offering	\$

If the underwriters exercise their option to purchase additional shares of our common stock in full in this offering, the increase in as adjusted net tangible book value per share to existing stockholders would be \$ per share and the dilution to purchasers of common stock in this offering would be \$ per share.

The foregoing tables are calculated based on 32,274,740 shares of our common stock that were outstanding on June 30, 2018, and exclude as of that date:

5,445,236 shares of common stock issuable upon the exercise of options with a weighted average exercise price of \$15.61;

39,500 shares issuable upon vesting of restricted stock units; and

2,236,302 shares of common stock reserved for issuance under our 2015 Equity Incentive Plan and 186,752 shares reserved for issuance under our 2015 Employee Stock Purchase Plan.

New investors will experience further dilution if any of our outstanding options are exercised or new options are issued and exercised under our equity incentive plans. Furthermore, we may choose to raise additional capital through the sale of equity or convertible debt securities due to market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital in this manner, the issuance of such securities could result in further dilution of stockholders.

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Table of Contents**PRICE RANGE OF COMMON STOCK**

Our common stock is traded on The Nasdaq Global Select Market under the symbol RGNX. The following table sets forth the range of high and low sales prices of our common stock as quoted on The Nasdaq Global Select Market for the periods indicated.

Year Ending December 31, 2018	High	Low
3rd Quarter (through August 7, 2018)	\$ 85.10	\$ 64.55
2nd Quarter	\$ 75.15	\$ 26.80
1st Quarter	\$ 42.00	\$ 23.25
Year Ended December 31, 2017	High	Low
4th Quarter	\$ 36.10	\$ 24.35
3rd Quarter	\$ 33.85	\$ 17.60
2nd Quarter	\$ 22.95	\$ 16.30
1st Quarter	\$ 24.15	\$ 16.30
Year Ended December 31, 2016	High	Low
4th Quarter	\$ 24.55	\$ 13.61
3rd Quarter	\$ 16.47	\$ 7.07
2nd Quarter	\$ 13.77	\$ 7.71
1st Quarter	\$ 17.31	\$ 8.50

On August 7, 2018, the closing sale price of our common stock, as reported by Nasdaq was \$70.80 per share. As of August 3, 2018, there were approximately five holders of record of our common stock. The number of holders of record of our common stock does not reflect the number of beneficial holders whose shares are held by depositors, brokers or other nominees.

DIVIDEND POLICY

We have not declared or paid any cash dividends on our common stock since our inception. We do not plan to pay dividends in the foreseeable future.

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MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

FOR NON-U.S. HOLDERS OF COMMON STOCK

The following describes the material U.S. federal income tax consequences to non-U.S. holders (as defined below) of the acquisition, ownership and disposition of our common stock issued pursuant to this offering. This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, does not address the potential application of the Medicare contribution tax and does not address any estate or gift tax consequences or any tax consequences arising under any state, local or foreign tax laws, or any other U.S. federal tax laws. This discussion is based on the Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions and published rulings and administrative pronouncements of the Internal Revenue Service, or IRS, all as in effect as of the date of this prospectus supplement. These authorities may change, possibly retroactively, resulting in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the U.S. Internal Revenue Service, or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This discussion is limited to non-U.S. holders who purchase our common stock issued pursuant to this offering and who hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all of the U.S. federal income tax consequences that may be relevant to a particular holder in light of such holder's particular circumstances. This discussion also does not consider any specific facts or circumstances that may be relevant to holders subject to special rules under the U.S. federal income tax laws, including, without limitation, certain former citizens or long-term residents of the United States, partnerships or other pass-through entities, a non-U.S. governmental or sovereign entity or any entity qualifying under Section 892 of the Code, corporations that accumulate earnings to avoid U.S. federal income tax, banks, financial institutions, investment funds, insurance companies, brokers, dealers or traders in securities, tax-exempt organizations, tax-qualified retirement plans, persons subject to the alternative minimum tax, persons that own, or have owned, actually or constructively, more than 5% of our common stock, persons holding our common stock as part of a hedging or conversion transaction or straddle, or a constructive sale, or other risk reduction strategy and persons required to accelerate the recognition of any item of gross income for U.S. federal income tax purposes with respect to our common stock as a result of such item being taken into account in an applicable financial statement.

If an entity or arrangement that is classified as a partnership for U.S. federal income tax purposes holds our common stock, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. Partnerships holding our common stock and the partners in such partnerships are urged to consult their tax advisors as to particular U.S. federal income tax consequences to them of holding and disposing of our common stock.

PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE U.S. FEDERAL INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK IN THEIR PARTICULAR CIRCUMSTANCES, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL OR FOREIGN TAX LAWS AND ANY OTHER U.S. FEDERAL TAX LAWS.

Definition of non-U.S. holder

For purposes of this discussion, a non-U.S. holder is any beneficial owner of our common stock that is not a U.S. person or a partnership (including any entity or arrangement treated as a partnership) for U.S. federal income tax

purposes. A U.S. person is any of the following:

an individual citizen or resident of the United States;

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a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof or the District of Columbia;

an estate, the income of which is subject to U.S. federal income tax regardless of its source; or

a trust (1) whose administration is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust, or (2) that has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

Distributions on our common stock

If we make cash or other property distributions on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital to the extent of the holder's tax basis in our common stock, and, thereafter, as gain realized on the sale or other disposition of our common stock, which is taxed as described in the section of this prospectus supplement titled "Gain on disposition of our common stock" below.

Subject to the discussion below regarding backup withholding and FATCA, dividends (out of earnings and profits) paid to a non-U.S. holder of our common stock generally will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends, or such lower rate specified by an applicable income tax treaty. To receive the benefit of a reduced treaty rate, a non-U.S. holder must furnish to us or our paying agent a valid IRS Form W-8BEN or IRS Form W-8BEN-E (or applicable successor form) including a U.S. taxpayer identification number and certifying such holder's qualification for the reduced rate. This certification must be provided to us or our paying agent prior to the payment of dividends and must be updated periodically. If the non-U.S. holder holds the stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through other intermediaries. Non-U.S. holders that do not timely provide the required certification, but that qualify for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

If a non-U.S. holder holds our common stock in connection with the conduct of a trade or business in the United States, and dividends paid on our common stock are effectively connected with such holder's U.S. trade or business (and are attributable to such holder's permanent establishment in the United States if required by an applicable tax treaty), the non-U.S. holder will be exempt from U.S. federal withholding tax. To claim the exemption, the non-U.S. holder must generally furnish a properly executed IRS Form W-8ECI (or applicable successor form).

Any dividends paid on our common stock that are effectively connected with a non-U.S. holder's U.S. trade or business (and if required by an applicable income tax treaty, are attributable to a permanent establishment maintained by the non-U.S. holder in the United States) generally will be subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a foreign corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules, reduced rates of withholding on dividends, or branch profits tax.

Gain on taxable disposition of our common stock

Subject to the discussion below regarding backup withholding and FATCA, a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized upon the sale, exchange or other taxable disposition of our common stock, unless:

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the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States, and if required by an applicable income tax treaty, is attributable to a permanent establishment maintained by the non-U.S. holder in the United States;

the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of disposition, and certain other requirements are met; or

our common stock constitutes stock in a United States real property holding corporation, or USRPHC, for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding the disposition or the non-U.S. holder's holding period for our common stock and our common stock ceases to be regularly traded on an established securities market prior to the beginning of the calendar year in which the sale or disposition occurs.

The determination of whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our other trade or business assets and our foreign real property interests. We believe we are not currently, and we do not anticipate becoming, a USRPHC for U.S. federal income tax purposes.

Gain described in the first and third bullet points above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a foreign corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of any gain described in the first bullet point above that constitutes effectively connected earnings and profits for the taxable year, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules. Gain described in the second bullet point above will be subject to U.S. federal income tax at a flat 30% rate (or such lower rate specified by an applicable income tax treaty), but may be offset by certain U.S.-source capital losses (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

Information reporting and backup withholding

Annual reports are required to be filed with the IRS and provided to each non-U.S. holder indicating the amount of dividends on our common stock paid to such holder and the amount of any tax withheld with respect to those dividends. These information reporting requirements apply even if no withholding was required because the dividends were effectively connected with the holder's conduct of a U.S. trade or business, or withholding was reduced or eliminated by an applicable income tax treaty. This information also may be made available under an income tax treaty or other agreement with the tax authorities in the country in which the non-U.S. holder resides or is established. Backup withholding, currently at a 24% rate, generally will not apply to payments to a non-U.S. holder of dividends on or the gross proceeds of a disposition of our common stock provided the non-U.S. holder furnishes the required certification as to its non-U.S. status, such as by providing a valid IRS Form W-8BEN, IRS Form W-8BEN-E, IRS Form W-8EXP or IRS Form W-8ECI, or certain other requirements are met. Notwithstanding the foregoing, backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

Backup withholding is not an additional tax. If any amount is withheld under the backup withholding rules, the non-U.S. holder should consult with a U.S. tax advisor regarding the possibility of and procedure for obtaining a refund or a credit against the non-U.S. holder's U.S. federal income tax liability.

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Foreign Account Tax Compliance Act

Certain foreign financial institutions as defined under the Foreign Account Tax Compliance Act, or FATCA, must comply with information reporting rules with respect to their U.S. account holders and investors. A non-U.S. holder that fails to certify that it is not a foreign financial institution or fails to comply with due diligence or information reporting obligations under FATCA is subject to FATCA withholding at a rate of 30% on payments of dividends by us and the entire gross proceeds from the sale or other taxable disposition of our common stock on or after January 1, 2019. This FATCA withholding tax will apply regardless of whether the non-U.S. holder holds our common stock as beneficial owner or intermediary and regardless of whether the payment is otherwise subject to U.S. nonresident withholding tax. FATCA withholding does not apply to withholdable payments made directly to foreign governments, international organizations, foreign central banks of issue and individuals that provide appropriate certification on IRS Form W-8BEN, W-8BEN-E or IRS Form W-8EXP.

An intergovernmental agreement between the United States and an applicable non-U.S. country may modify the due diligence and information reporting requirements described above.

Non-U.S. Holders are urged to consult with their own tax advisors regarding the consequences, including the certification requirements, of the FATCA provisions and any applicable intergovernmental agreement based on their particular circumstances.

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Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus supplement, the underwriters named below, for whom Morgan Stanley & Co. LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Barclays Capital Inc. are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Barclays Capital Inc.	
Raymond James & Associates, Inc.	
Total:	

The underwriters and the representatives are collectively referred to as the underwriters and the representatives, respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus supplement are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus supplement if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' option to purchase additional shares described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus supplement and part to certain dealers at a price that represents a concession not in excess of \$ _____ per share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase up to _____ additional shares of common stock at the public offering price listed on the cover page of this prospectus supplement, less underwriting discounts and commissions. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional _____ shares of common stock.

	Per Share	Total	
		No Exercise	Full Exercise
Public offering price			

Underwriting discounts and commissions
to be paid by us:

Proceeds, before expenses, to us

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately \$. We have agreed to reimburse the underwriters for expense relating to clearance of this offering with the Financial Industry Regulatory Authority up to \$10,000. In accordance with FINRA Rule 5110, the reimbursed fee is deemed underwriting compensation for this offering.

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

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We and all directors and officers and their affiliates have agreed that, without the prior written consent of Morgan Stanley & Co. LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Barclays Capital Inc. on behalf of the underwriters, we and they will not, during the period ending 60 days after the date of this prospectus supplement, or the restricted period:

offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock; or

enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock,

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise.

In addition, we have agreed that, without the prior written consent of Morgan Stanley & Co. LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Barclays Capital Inc. on behalf of the underwriters, we will not, during the restricted period, file any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock, and each of our directors and officers and their affiliates has agreed that, without the prior written consent of Morgan Stanley & Co. LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Barclays Capital Inc. on behalf of the underwriters, he, she or it will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph do not apply to:

transfers or dispositions of shares of common stock or any security convertible into or exercisable or exchangeable for common stock as a bona fide gift including to a charitable organization;

transfers or distributions of shares of common stock or any security convertible into or exercisable or exchangeable for common stock to limited partners, general partners, managers, directors, officers, employees, members, stockholders or trust beneficiaries or to any controlled investment fund or other entity, including transfers or distributions of such securities to a fund managed by the same manager or managing member or general partner or management company or by an entity controlling, controlled by, or under common control with such manager or managing member or general partner or managing company;

transfers or dispositions of shares of common stock or any security convertible into common stock by will or other testamentary document or by intestacy;

transfers or dispositions of shares of common stock or any security convertible into or exercisable or exchangeable for common stock to any trust for the direct or indirect benefit of immediate family members in a transaction not involving a disposition for value;

transfers or dispositions of common stock acquired in open market transactions after the completion of this offering;

the exercise of options to purchase shares of common stock granted under a stock incentive plan or stock purchase plan described in this prospectus supplement or the exercise of warrants to purchase shares of common stock (or any security convertible into or exercisable or exchangeable for common stock) described in this prospectus supplement and outstanding as of the date of this prospectus supplement, provided that the underlying common stock continues to be subject to the restrictions set forth above;

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the exercise of options to purchase shares of common stock granted under a stock incentive plan or stock purchase plan described in this prospectus supplement pursuant to an arrangement whereby we withhold shares issuable pursuant to such option in payment of the exercise price, provided that the underlying common stock continues to be subject to the restrictions set forth above;

the transfer of common stock or any security convertible into or exchangeable for common stock that occurs by operation of law pursuant to a qualified domestic order or in connection with a divorce settlement or other court order;

the establishment of a trading plan that satisfies the requirements of Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of common stock during the restricted period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required or voluntarily made regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the restricted period;

the transfer to us of common stock upon a vesting event or upon the exercise of options or warrants to purchase common stock, in each case on a cashless or net exercise basis or to cover tax withholding obligations in connection with such vesting or exercise, provided that no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of common stock, shall be required or shall be voluntarily made;

transfers in connection with a bona fide third party tender offer, merger, consolidation or other similar transaction that is approved by our board of directors, made to all holders of our common stock involving a change of control occurring after the closing of this offering, provided that in the event that the tender offer, merger, consolidation or other such transaction is not completed, the common stock shall remain subject to the restrictions in the immediately preceding paragraph; and

transfers of up to 55,030 shares in the aggregate of common stock pursuant to any contract, instruction or plan that satisfies the requirements of Rule 10b5-1 under the Exchange Act that has been entered into prior to the date of this offering, provided that (i) to the extent a public announcement or filing under the Exchange Act is required of such plan, such announcement or filing shall include a statement to the effect that the transfer was pursuant to an existing 10b5-1 plan and (ii) no filing under Section 16(a) of the Exchange Act shall be voluntarily made by or on behalf of the undersigned or us regarding such plan; provided further that (i) in the case of any transfer or distribution as described in the first, second, third, fourth or eighth bullet point above, the recipient shall agree to be subject to the restrictions described in the immediately preceding paragraph and (ii) in the case of any transfer or distribution described in the first, second, fourth, fifth, seventh or eighth bullet point above, no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of common stock, will be required or will be voluntarily made during the restricted period.

In addition, the restrictions described in the paragraph above relating to us do not apply to:

the shares to be sold in this offering;

our issuance of shares of common stock or securities convertible into or exercisable for shares of common stock upon the exercise of an option or warrant or the conversion of a security outstanding on the date of the purchase agreement and disclosed in this prospectus supplement;

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our issuance of shares of common stock or other securities convertible into or exercisable for shares of common stock pursuant to our equity incentive plans described in this prospectus supplement, provided that, prior to the issuance of any such shares of common stock or other securities where the shares of common stock or other securities vest within the restricted period, we will cause each recipient of such grant or issuance to execute a lock-up agreement; and

the entry into an agreement providing for the issuance of shares of common stock or any security convertible into or exercisable for shares of common stock in connection with joint ventures, commercial relationships or other strategic transactions, and the issuance of any such securities pursuant to any such agreement, provided that the aggregate number of shares of common stock that we may sell or issue or agree to sell or issue, or that may be issuable upon conversion or exercise of all other securities that we may sell or issue or agree to sell or issue, pursuant to this exception shall not exceed 5% of the total number of shares of common stock issued and outstanding immediately following the completion of this offering, and provided further, that each recipient of shares or other securities issued pursuant to this exception shall be subject to the restrictions described in the paragraph above.

Morgan Stanley & Co. LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Barclays Capital Inc. in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the option. The underwriters can close out a covered short sale by exercising the option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the option. The underwriters may also sell shares in excess of the option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares 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 common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus supplement in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the

underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

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In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive, or each Relevant Member State, an offer of shares to the public of any shares of our common stock may not be made in that Relevant Member State, except that an offer of shares to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive:

- (a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive);
or
- (c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive and each person who initially acquires any shares of common stock or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and the Company that it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive.

In the case of any shares of our common stock being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares of our common stock acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares of our common stock to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

For the purposes of the above provisions, the expression an offer of shares to the public in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, and the expression Prospectus Directive means Directive 2003/71/EC (as amended), and includes any relevant implementing measure in the Relevant Member State.

United Kingdom

Each underwriter has represented and agreed that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, or the FSMA, received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

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(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, or the ASIC, in relation to the offering. This prospectus supplement does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001, or the Corporations Act, and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons, referred to as the Exempt Investors, who are sophisticated investors (within the meaning of section 708(8) of the Corporations Act), professional investors (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus supplement contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus supplement is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

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Dubai International Financial Centre

This prospectus supplement relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or the DFSA. This prospectus supplement is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for the prospectus supplement. The shares to which this prospectus supplement relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus supplement you should consult an authorized financial advisor.

Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to professional investors as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a prospectus as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to professional investors as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph,

Japanese Person shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Singapore

This prospectus supplement has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

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securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

- (a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- (b) where no consideration is or will be given for the transfer;
- (c) where the transfer is by operation of law;
- (d) as specified in Section 276(7) of the SFA; or
- (e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

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LEGAL MATTERS

The validity of the common stock offered hereby and certain legal matters in connection with this offering will be passed upon by Covington & Burling LLP, Washington, D.C. Certain legal matters related to this offering will be passed upon for the underwriters by Davis Polk & Wardwell LLP, New York, New York.

EXPERTS

The financial statements incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2017 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 without charge on our website, www.regenxbio.com, and the SEC's website, www.sec.gov as soon as reasonably practicable after we file them with, or furnish them to, the SEC. Copies of these materials may be inspected and copied at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. You may obtain copies of our filings by writing to the SEC at the address above and paying prescribed rates. You also may 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 supplement) by writing or calling us at the following address or telephone number:

REGENXBIO Inc.

Attention: General Counsel

9600 Blackwell Road, Suite 210

Rockville, MD 20850

(240) 552-8181

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement 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 supplement, 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, 2017, filed with the SEC on March 6, 2018;

the information contained in our Definitive Proxy Statement on Schedule 14A for our 2018 Annual Meeting of Stockholders, filed with the SEC on April 12, 2018, to the extent incorporated by reference in Part III of our Annual Report on Form 10-K for the year ended December 31, 2017;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018, filed with the SEC on May 8, 2018 and August 8, 2018, respectively;

our Current Reports on Form 8-K filed with the SEC on January 4, 2018 (with respect to Item 8.01 only), January 9, 2018 (with respect to Item 1.01 only), January 11, 2018 (as amended on February 1, 2018), May 29, 2018 and June 11, 2018;

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the description of our common stock contained in the Registration Statement on Form 8-A, filed on September 9, 2015, 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 termination of this offering, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus supplement and deemed to be part of this prospectus supplement from the time of the filing of such reports and documents.

This prospectus supplement and the accompanying prospectus as further supplemented 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 supplement or the accompanying prospectus. You should rely only on the information incorporated by reference or provided in this prospectus supplement and accompanying prospectus. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus supplement and the accompanying prospectus is accurate as of any date other than the date of this prospectus supplement, the date of the accompanying prospectus or the date of the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, respectively.

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PROSPECTUS

Common Stock

Preferred Stock

Warrants

Debt Securities

Rights

Units

5,057,458 Shares of Common Stock for Resale by Selling Stockholders

We may offer and sell, from time to time, in one or more offerings, our shares of common stock, shares of preferred stock, warrants, debt securities, rights to purchase common stock, preferred stock, debt securities or units and units that include any of these securities. We may sell any combination of these securities in one or more offerings in amounts, at prices and on terms that we will determine at the time of the offering.

In addition, the selling stockholders may from time to time offer and sell up to an aggregate of 5,057,458 shares of our common stock. We will not receive any of the proceeds from the sale of our common stock by the selling stockholders.

This prospectus provides you with a general description of the securities we may offer. Each time we offer securities pursuant to this prospectus, we will provide a prospectus supplement containing specific terms of the particular offering together with this prospectus. In any prospectus supplement relating to any sales by selling stockholders, we will, among other things, identify the number of shares of our common stock that each of the selling stockholders will be selling. You should read this prospectus and the applicable prospectus supplement carefully before you invest in any securities. The prospectus supplement also may add, update or change information contained in this prospectus. This prospectus may not be used to offer and sell securities unless accompanied by the applicable prospectus supplement.

The securities may be offered and sold in the same offering or separate offerings directly or to or through underwriters or dealers, and also to other purchasers or through agents. The names of any underwriters or agents that are included in a sale of securities to you, and any applicable commissions or discounts, will be stated in an accompanying prospectus supplement.

Our common stock is listed on The Nasdaq Global Select Market under the symbol RGNX. On August 7, 2018, the closing price of our common stock was \$70.80.

We are an emerging growth company, as that term is used in the Jumpstart our Business Startups Act of 2012, and have elected to avail ourselves of certain reduced public company reporting requirements for this prospectus and future filings.

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 5 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 August 8, 2018

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ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, as a well-known seasoned issuer, as defined under Rule 405 under the Securities Act of 1933, or the Securities Act. Under this shelf registration process, we may, from time to time, offer or sell any combination of the securities described in this prospectus in one or more offerings in amounts, at prices and on terms that we determine at the time of the offering. In addition, under this shelf registration process, the selling stockholders may from time to time sell up to an aggregate of 5,057,458 shares of our common stock in one or more offerings.

This prospectus provides you with a general description of the securities we or the selling stockholders may offer. Each time we or the selling stockholders offer securities under this registration statement, we will describe in a prospectus supplement, which will be delivered with this prospectus, specific information about the offering and the terms of the particular securities offered. The specific terms of the offered securities may vary from the general terms of the securities described in this prospectus, and accordingly the description of the securities contained in this prospectus is subject to, and qualified by reference to, the specific terms of the offered securities contained in the applicable prospectus supplement. The prospectus supplement also may add, update or change information contained in this prospectus. Before making an investment decision, you should read carefully both this prospectus and any prospectus supplement together with the documents incorporated by reference into this prospectus as described below under the heading Information Incorporated by Reference. For more detailed information about the securities, you can also read the exhibits to the registration statement. Those exhibits have been either filed with the registration statement or incorporated by reference to earlier SEC filings listed in the registration statement.

Neither we nor the selling stockholders have authorized anyone to provide you with information in addition to or different from that contained in this prospectus or any applicable prospectus supplement. We take no responsibility for, and can provide no assurance as to the reliability of, any information that others may provide. We and the selling stockholders will be offering to sell, and seeking offers to buy, the shares only in jurisdictions where offers and sales are permitted. You should not assume that the information in this prospectus, any applicable prospectus supplement or any free writing prospectus that we have prepared is accurate as of any date other than the date of those documents, and that any information in documents that we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any prospectus supplement or any sale of a security.

Unless the context otherwise requires, throughout this prospectus and any applicable prospectus supplement, the words REGENXBIO, we, or us refer to REGENXBIO Inc. and the term securities refers collectively to the securities registered hereunder or any combination thereof.

NAV, REGENXBIO and the REGENXBIO logos are our registered trademarks. Any other trademarks appearing in this prospectus are the property of their respective holders.

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. You may also read and copy these materials at the public reference room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of its public reference room.

We make available, free of charge, through our website at 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

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applicable amendments, filed or furnished pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, or 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: General Counsel

9600 Blackwell Road, Suite 210

Rockville, MD 20850

(240) 552-8181

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INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus the information contained in documents that we file with them, 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, 2017, filed with the SEC on March 6, 2018;

the information contained in our Definitive Proxy Statement on Schedule 14A for our 2018 Annual Meeting of Stockholders, filed with the SEC on April 12, 2018 to the extent incorporated by reference in Part III of our Annual Report on Form 10-K for the year ended December 31, 2017;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018, filed with the SEC on May 8, 2018 and August 8, 2018, respectively;

our Current Reports on Form 8-K filed with the SEC on January 4, 2018 (with respect to Item 8.01 only), January 9, 2018 (with respect to Item 1.01 only), January 11, 2018 (as amended on February 1, 2018), May 29, 2018 and June 11, 2018;

the description of our common stock contained in our Registration Statement on Form 8-A, filed on September 9, 2015, 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, 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 and the applicable prospectus supplement 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. You should rely only on the information incorporated by reference or provided in this prospectus, the applicable prospectus supplement or any free writing prospectus that we have prepared that relates to a particular offering. 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.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus and each prospectus supplement contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, which are subject to the safe harbor created by those sections for such statements. The words believe, may, will, estimate, continue, anticipate, design, intend, expect, could, predict, seek, should, would or the negative version of these words and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, strategy, short- and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties, assumptions and other important factors, including those described in this prospectus and the documents incorporated herein by reference, particularly in the sections of such documents titled Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations. In light of these risks, uncertainties, assumptions and other factors, the forward-looking events and circumstances discussed in this prospectus and the information incorporated by reference herein may not occur, and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements.

Forward-looking statements include, but are not limited to, statements about:

the timing of enrollment, commencement and completion and the success of clinical trials conducted by us, our licensees and our partners;

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 ability to obtain and maintain regulatory approval of our product candidates, and the labeling for any approved products;

the scope, progress, expansion and costs of developing and commercializing our product candidates;

our ability to obtain and maintain intellectual property protection for our product candidates and 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 product candidates;

our ability to establish and maintain development partnerships;

our expectations regarding our expenses and revenue;

our expectations regarding regulatory developments in the United States and foreign countries; and

the use or sufficiency of our cash and cash equivalents and needs for additional financing.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. Any forward-looking statement made by us in this prospectus and the information incorporated by reference herein speaks only as of the date of the respective document. Except as required by law, we disclaim any duty to update any of these forward-looking statements after the date such statements are made, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

You should read this prospectus and the documents contained or incorporated by reference herein completely and with the understanding that our actual future results may be materially different from what we expect.

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All written and verbal forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We caution investors not to rely too heavily on the forward-looking statements we make or that are made on our behalf.

In addition, you should refer to the section of this prospectus entitled **Risk Factors** as well as the **Risk Factors** disclosed in the documents we have incorporated by reference, for a discussion of other important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties to which these forward-looking statements are subject, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

Table of Contents**THE COMPANY**

We are a leading clinical-stage biotechnology company seeking to improve lives through the curative potential of gene therapy. Our gene therapy product candidates are designed to deliver genes to cells to address genetic defects or to enable cells in the body to produce therapeutic proteins that are intended to impact disease. Through a single administration, our gene therapy product candidates are designed to provide long-lasting effects, potentially significantly altering the course of disease and delivering improved patient outcomes.

Our product candidates all utilize viral vectors from our NAV Technology Platform, which consists of exclusive rights to AAV7, AAV8, AAV9 AAVrh10 and over 100 other novel adeno-associated virus, or AAV, gene delivery vectors. We and our third-party NAV technology platform licensees are applying the NAV Technology Platform in the development of a broad pipeline of product candidates in multiple therapeutic areas.

Our principal executive offices are located at 9600 Blackwell Road, Suite 210, Rockville, Maryland 20850 and our telephone number is (240) 552-8181.

RISK FACTORS

Investing in our securities involves risk. You should carefully consider the specific risks discussed or incorporated by reference into this prospectus and the applicable prospectus supplement, together with all the other information contained in this prospectus and the applicable prospectus supplement or incorporated by reference into this prospectus and the applicable prospectus supplement, including the risks, uncertainties and assumptions discussed under the caption "Risk Factors" in documents we file from time to time with the SEC, specifically 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 any additional risks and 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.

RATIO OF EARNINGS TO FIXED CHARGES AND**RATIO OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS**

The following table sets forth our ratio of earnings to fixed charges and ratio of earnings to combined fixed charges and preferred stock dividends for each of the periods indicated. For purposes of calculating the ratios below, earnings consist of income (loss) before income taxes plus fixed charges. Fixed charges consist of interest expense and an estimate of the interest portion of rental expense. The ratios below have been computed on a consolidated basis and should be read in conjunction with the consolidated financial statements and accompanying notes incorporated by reference into this prospectus.

Six Months Ended	2017	2016	Year Ended December 31,	2015	2014	2013
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**June 30,
2018**

Ratio of earnings to fixed charges ⁽¹⁾	301.2	N/A	N/A	N/A	N/A	N/A
Ratio of earnings to combined fixed charges and preferred stock dividends ⁽²⁾	301.2	N/A	N/A	N/A	N/A	N/A

- (1) Due to losses incurred for the years ended December 31, 2017, 2016, 2015, 2014 and 2013, the ratio coverage for each period was less than 1:1. We would have needed to generate additional earnings of \$73.2 million, \$63.4 million, \$22.8 million, \$4.0 million and \$5.4 million, respectively, to cover our fixed charges in such periods.
- (2) Due to losses incurred for the years ended December 31, 2017, 2016, 2015, 2014 and 2013, the ratio coverage for each period was less than 1:1. We would have needed to generate additional earnings of \$73.2 million, \$63.4 million, \$24.6 million, \$4.8 million and \$5.8 million, respectively, to cover our combined fixed charges and preferred stock dividends in such periods.

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Upon the closing of our initial public offering on September 22, 2015, all outstanding shares of our convertible preferred stock converted into shares of common stock. Since that date, we have no shares of preferred stock outstanding and, consequently, our ratio of earnings to combined fixed charges and preferred stock dividends for the six months ended June 30, 2018 and the years ended December 31, 2017 and 2016 is the same as our ratio of earnings to fixed charges for such periods.

USE OF PROCEEDS

Unless otherwise indicated in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities offered under this prospectus for general corporate purposes, which may include, but are not limited to, providing financing for clinical trials, capital expenditures, additions to working capital, development of our product candidate pipeline, general and administrative expenses or other corporate obligations. We may use a portion of the net proceeds to pay off outstanding indebtedness, if any, or acquire or invest in businesses, products or technologies. We will set forth in the applicable prospectus supplement our intended use for the net proceeds received from the sale of any securities. Pending the use of such proceeds, we intend to invest the net proceeds in short-term, investment grade, interest-bearing instruments.

We will not receive any proceeds from the sale of shares of our common stock by the selling stockholders.

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. In addition, the selling stockholders may sell up to an aggregate of 5,057,458 shares of our common stock from time to time in one or more offerings. 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 [Where You Can Find More Information](#).

Our authorized capital stock consists of 110,000,000 shares, with a par value of \$0.0001 per share, of which:

100,000,000 shares are designated as common stock; and

10,000,000 shares are designated as preferred stock.

As of August 3, 2018, we had outstanding 32,308,644 shares of common stock held of record by five stockholders. No shares of preferred stock were outstanding as of such date.

Common Stock

General

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. 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. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to our common 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.

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

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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.

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.

Preferred Stock

General

We may issue shares of preferred stock from time to time in one or more series, the terms of which may be determined at the time of issuance by our board of directors, without further action by our stockholders. Such series of preferred stock may include voting rights, preferences as to dividends and liquidation, conversion rights, redemption rights and sinking fund provisions. The shares of each series of preferred stock will have preferences, limitations and relative rights, including voting rights, identical with those of other shares of the same series and, except to the extent provided in the description of such series, of those of other series of preferred stock.

The issuance of preferred stock could decrease the amount of earnings and assets available for distribution to the holders of common stock or adversely affect the rights and powers, including voting rights, of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company, which could depress the market price of our common stock.

The terms of any particular series of preferred stock will be described in the prospectus supplement relating to the offering of shares of such series of preferred stock, including, where applicable:

the series designation, stated value and liquidation preference of such preferred stock;

the number of shares offered;

the offering price;

the dividend rate or rates (or method of calculation), the date or dates from which dividends shall accrue, and whether such dividends shall be cumulative or noncumulative and, if cumulative, the dates from which dividends shall commence to cumulate;

any redemption or sinking fund provisions;

the amount that shares of such series shall be entitled to receive in the event of our liquidation, dissolution or winding-up;

the terms and conditions, if any, on which shares of such series shall be convertible or exchangeable for shares of our stock of any other class or classes, or other series of the same class;

the voting rights, if any, of shares of such series in addition to those set forth under the caption entitled, **Voting Rights** below;

the status as to reissuance or sale of shares of such series redeemed, purchased or otherwise reacquired, or surrendered to us on conversion or exchange;

the conditions and restrictions, if any, on the payment of dividends or on the making of other distributions on, or the purchase, redemption or other acquisition by us, of our common stock or of any other class of our stock ranking junior to the shares of such series as to dividends or upon liquidation (including, but not limited to, at such times as there are arrearages in the payment of dividends or sinking fund installments);

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the conditions and restrictions, if any, on the creation of indebtedness, or on the issue of any additional stock ranking on a parity with or prior to the shares of such series as to dividends or upon liquidation; and

any other rights, preferences, privileges, limitations and restrictions of such preferred stock.

If we issue shares of preferred stock under this prospectus and any related prospectus supplement, the shares will be fully paid and non-assessable and will not have, or be subject to, any preemptive or similar rights.

Voting Rights

The Delaware General Corporation Law provides that the holders of shares of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Transfer Agent and Registrar

The transfer agent and registrar for any series of preferred stock will be set forth in the applicable prospectus supplement.

Effects on Common Stock

Our issuance of preferred stock could decrease the amount of earnings and assets available for distribution to the holders of common stock or could adversely affect the rights and powers, including voting rights, of the holders of common stock. The issuance of preferred stock could have the effect of decreasing the market price of our common stock.

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.

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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 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 amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board or 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.

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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.

Amendment of Charter 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.

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 with 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. 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.

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 restated certificate of incorporation and 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

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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, including affiliates of the selling stockholders, 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.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of shares of our common stock, shares of our preferred stock or debt securities. The following description sets forth certain general terms and provisions of the warrants that we may offer pursuant to this prospectus. The particular terms of the warrants and the extent, if any, to which the general terms and provisions may apply to the warrants so offered will be described in the applicable prospectus supplement.

Warrants may be issued independently or together with other securities and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants and will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants.

A copy of the forms of the warrant agreement and the warrant certificate, if any, relating to any particular issue of warrants will be filed with the SEC each time we issue warrants, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the warrant agreement and the related warrant certificate, if any, see [Where You Can Find More Information](#).

Stock Warrants

The prospectus supplement relating to a particular issue of warrants to issue shares of our common stock or shares of our preferred stock will describe the terms of the common share warrants and preferred share warrants, including the following:

the title of the warrants;

the offering price for the warrants, if any;

the aggregate number of the warrants;

the designation and terms of the shares of common stock or shares of preferred stock that may be purchased upon exercise of the warrants;

the terms for changes or adjustments to the exercise price of the warrants;

if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each security;

if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;

the number of shares of common stock or shares of preferred stock that may be purchased upon exercise of a warrant and the price at which the shares may be purchased upon exercise;

the dates on which the right to exercise the warrants commence and expire;

if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;

the currency or currency units in which the offering price, if any, and the exercise price are payable;

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if applicable, a discussion of material U.S. federal income tax considerations;

anti-dilution provisions of the warrants, if any;

redemption or call provisions, if any, applicable to the warrants;

information with respect to book-entry procedures;

identity of the warrant agent; and

any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Debt Warrants

The prospectus supplement relating to a particular issue of warrants to issue debt securities will describe the terms of those warrants, including the following:

the title of the warrants;

the offering price for the warrants, if any;

the aggregate number of the warrants;

the designation and terms of the debt securities purchasable upon exercise of the warrants;

the terms for changes or adjustments to the exercise price of the warrants;

if applicable, the designation and terms of the debt securities that the warrants are issued with and the number of warrants issued with each debt security;

if applicable, the date from and after which the warrants and any debt securities issued with them will be separately transferable;

the principal amount of debt securities that may be purchased upon exercise of a warrant and the price at which the debt securities may be purchased upon exercise;

the dates on which the right to exercise the warrants will commence and expire;

if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;

whether the warrants represented by the warrant certificates or debt securities that may be issued upon exercise of the warrants will be issued in registered or bearer form;

information relating to book-entry procedures, if any;

the currency or currency units in which the offering price, if any, and the exercise price are payable;

if applicable, a discussion of material U.S. federal income tax considerations;

anti-dilution provisions of the warrants, if any;

redemption or call provisions, if any, applicable to the warrants;

information with respect to book-entry procedures;

identity of the warrant agent; and

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any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Exercise of Warrants

Each holder of a warrant will be entitled to purchase, at the exercise price set forth in the applicable prospectus supplement, the number of shares of common stock, shares of preferred stock or the principal amount of debt securities being offered. Holders may exercise warrants at any time up to the close of business on the expiration date set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants are void. Holders may exercise warrants as set forth in the prospectus supplement relating to the warrants being offered.

Until a holder exercises the warrants to purchase our shares of common stock, shares of preferred stock or debt securities, the holder will not have any rights as a holder of our shares of common stock, shares of preferred stock or debt securities, as the case may be, by virtue of ownership of warrants, including, with respect to equity warrants, any right to vote, consent, receive dividends, or receive notice as stockholders with respect to any meeting of the stockholders for the election of directors or any other matter and with respect to debt warrants, any right to receive payment of principal or premium, if any, or interest on the debt securities purchasable upon exercise.

DESCRIPTION OF DEBT SECURITIES

We may issue, separately or together with, or upon conversion, exercise or exchange of other securities, debt securities, including debentures, notes or other evidences of indebtedness as set forth in the applicable prospectus supplement. The debt securities will be issued under one or more separate indentures between us and a trustee to be identified in an accompanying prospectus supplement. The following is a general description of the terms of debt securities we may issue from time to time. Particular terms of any debt securities we offer will be described in the prospectus supplement relating to such debt securities.

Because this section is a summary, it does not describe every aspect of any debt securities we may issue or the indenture governing any such debt securities. Particular terms of any debt securities we offer and the applicable indenture will be described in the prospectus supplement relating to such offering, and we urge you to read such description in its entirety, because it, and not this description, will define the rights of holders of such debt securities.

A prospectus supplement will describe the particular terms of any series of debt securities we may issue, including some or all of the following:

the designation or title of the series of debt securities;

the aggregate principal amount of the series of debt securities, the denominations in which the offered debt securities will be issued and whether the offering may be reopened for additional securities of that series and on what terms;

the percentage of the principal amount at which the series of debt securities will be offered;

the date or dates on which principal will be payable;

the rate or rates (which may be either fixed or variable) and/or the method of determining such rate or rates of interest, if any;

the date or dates from which any interest will accrue, or the method of determining such date or dates, and the date or dates on which any interest will be payable;

the terms for redemption, extension or early repayment, if any;

the currencies in which the series of debt securities are issued and payable;

whether the securities are to be guaranteed and, if so, the guarantor or guarantors and the terms of the guarantees;

whether the amount of payments of principal, interest or premium, if any, on a series of debt securities will be determined with reference to an index, formula or other method and how these amounts will be determined;

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the place or places of payment, transfer, conversion and/or exchange of the debt securities;

the provision for any sinking fund;

any restrictive covenants;

events of default;

whether the series of debt securities are issuable in definitive or global form or in definitive form only upon satisfaction of certain conditions;

any provisions for legal defeasance or covenant defeasance;

whether and under what circumstances we will pay additional amounts in respect of any tax, assessment or governmental charge and, if so, whether we will have the option to redeem the debt securities rather than pay the additional amounts (and the terms of this option);

any provisions for convertibility or exchangeability of the debt securities into or for any other securities;

any listing of the debt securities on any securities exchange;

any paying agents, authenticating agents, security registrars or other agents for debt securities, if other than the trustee;

any provisions relating to any security provided for the debt securities, including any provisions regarding the circumstances under which collateral may be released or substituted;

if applicable, a discussion of certain U.S. federal income tax considerations, including those related to original issue discount, if applicable; and

any other material terms.

Unless the prospectus supplement states otherwise, principal, interest and premium, if any, will be paid by us in immediately available funds.

General

Any debt securities we issue will be governed by a document called an indenture, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. An indenture is a contract between us and a financial institution acting as trustee on behalf of the holders of the debt securities, and is subject to and governed by the Trust Indenture Act of 1939. The trustee has two main roles. First, the trustee can enforce holders' rights against us if we default. There are some limitations on the extent to which the trustee acts on holders' behalf, described in the second paragraph under "Description of Debt Securities - Events of Default." Second, the trustee performs certain administrative duties, such as sending interest and principal payments to holders.

The indenture provides that any debt securities proposed to be sold under this prospectus and the applicable prospectus supplement, including any debt securities issuable upon conversion or exchange of other offered securities, which we refer to as underlying debt securities, may be issued under the indenture in one or more series.

For purposes of this prospectus, any reference to the payment of principal of, or interest or premium, if any, on, debt securities will include additional amounts if required by the terms of the debt securities.

The indenture also provides that there may be more than one trustee thereunder, each with respect to one or more different series of securities issued thereunder. In the event that there is more than one trustee under the indenture, the powers and trust obligations of each trustee described in this prospectus will extend only to the one or more series of debt securities for which it is trustee. If two or more trustees are acting under an indenture, then the debt securities for which each trustee is acting would be treated as if issued under separate indentures.

We have the ability to issue debt securities with terms different from those of debt securities previously issued and, without the consent of the holders thereof, to reopen a previous issue of a series of debt securities and issue additional debt securities of that series unless the reopening is restricted when that series is created.

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Conversion and Exchange

If any debt securities are convertible into or exchangeable for other securities, the related prospectus supplement will explain the terms and conditions of the conversion or exchange, including the conversion price or exchange ratio (or the calculation method), the conversion or exchange period (or how the period will be determined), if conversion or exchange will be mandatory or at the option of the holder or us, provisions for adjusting the conversion price or the exchange ratio and provisions affecting conversion or exchange in the event of the redemption of the underlying debt securities. These terms may also include provisions under which the number or amount of other securities to be received by the holders of the debt securities upon conversion or exchange would be calculated according to the market price of the other securities as of a time stated in the prospectus supplement.

Payment and Paying Agents

Unless otherwise indicated in a prospectus supplement, the provisions described in this paragraph will apply to the debt securities. Payment of interest on a debt security on any interest payment date will be made to the person in whose name the debt security is registered at the close of business on the regular record date. Payment on debt securities of a particular series will be payable at the office of a paying agent or paying agents designated by us. Unless otherwise designated in the applicable prospectus supplement, the trustee will be designated as our paying agent.

We may also name any other paying agents in a prospectus supplement. We may designate additional paying agents, change paying agents or change the office of any paying agent. However, we will be required to maintain a paying agent in each place of payment for the debt securities of a particular series.

All moneys paid by us to a paying agent for payment on any debt security that remain unclaimed for a period of two years after the principal, premium or interest has become due and payable and was deposited with the paying agent will be paid to us, subject to any applicable abandoned property law.

Global Securities

The debt securities of any series may be represented, in whole or in part, by one or more global securities. Each global security will:

be registered in the name of a depository, or its nominee, that we will identify in a prospectus supplement;

be deposited with the trustee as custodian for the depository; and

bear any required legends.

No global security may be exchanged in whole or in part for debt securities registered in the name of any person other than the depository or any nominee unless:

the depositary has notified us that it is unwilling or unable to continue as depositary or has ceased to be qualified to act as depositary;

an event of default has occurred and is continuing with respect to the debt securities of the applicable series; or

any other circumstance described in a prospectus supplement has occurred permitting or requiring the issuance of any such security.

As long as the depositary, or its nominee, is the registered owner of a global security, the depositary or nominee will be considered the absolute owner of the debt securities represented by the global security for all purposes under the indenture. Participants in the depositary have no rights under the indenture with respect to the global securities held on their behalf by the depositary.

Payments on a global security will be made to the depositary or its nominee as the holder of the global security. Some jurisdictions have laws that require that certain purchasers of securities take physical delivery of such securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global security.

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Ownership of beneficial interests in a global security are required to be shown on and effected through the book entry system maintained by the depository (or its nominee), with respect to participants' interests, or any participant, with respect to interests of persons held by participants on their behalf.

Payments, transfers and exchanges relating to beneficial interests in a global security will be subject to policies and procedures of the depository and must be effected through the depository's (or its nominee's) book entry system. The depository's policies and procedures may change from time to time. We and the trustee have no responsibility or liability for the depository's or any participant's records with respect to beneficial interests in a global security.

Events of Default

Unless we indicate otherwise in a prospectus supplement with respect to a particular series of debt securities, the following will be events of default for any series of debt securities under the indenture:

we do not pay the principal of, or any premium on, a debt security of the series on its due date;

we do not pay interest on a debt security of the series within 30 days of its due date;

any guarantee with respect to the particular series of debt securities ceases to be of full force and effect;

we (or any guarantor) remain in breach of a covenant in respect of debt securities of the series for 60 days after we (or the applicable guarantor) receive a written notice of default from the trustee or holders of at least 25% of the aggregate principal amount of debt securities of the series specifying the default and demanding that it be remedied;

we file for bankruptcy or certain other events of bankruptcy, insolvency or reorganization occur; and

any other event of default occurs in respect of debt securities of the series described in the prospectus supplement.

The trustee may withhold notice to the holders of debt securities of any default, except in the payment of principal, premium or interest, if it considers the withholding of notice to be in the best interests of the holders.

Remedies if an Event of Default Occurs

If an event of default has occurred and has not been cured or waived, the trustee or the holders of not less than 25% in aggregate principal amount of the debt securities of the affected series may declare the unpaid principal, premium, if any, and accrued and unpaid interest of all the debt securities of that series to be due and immediately payable. This is called a declaration of acceleration. A declaration of acceleration may be canceled by the holders of a majority in principal amount of the debt securities of the affected series if the default is cured or waived and certain other conditions are satisfied.

Except in cases of default, the trustee typically is not required to take any action under an indenture at the request of any holders unless the holders offer the trustee reasonable protection from expenses and liability, or an indemnity. If reasonable indemnity is provided, the holders of a majority in aggregate principal amount of the outstanding debt securities of the relevant series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the trustee.

Before a holder is allowed to bring its own lawsuit or other formal legal action or take other steps to enforce its rights or protect its interests relating to any debt securities, the following must occur:

the holder must give the trustee written notice that an event of default has occurred and remains uncured;

the holders of at least 25% in aggregate principal amount of all outstanding debt securities of the relevant series must make a written request that the trustee take action because of the default and must offer reasonable indemnity to the trustee against the cost and other liabilities of taking that action;

the trustee must not have taken action for 60 days after receipt of the above notice and offer of indemnity; and

the holders of a majority in aggregate principal amount of the debt securities must not have given the trustee a direction inconsistent with the above notice during that 60-day period.

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However, a holder is entitled at any time to bring a lawsuit for the payment of money due on its debt securities on or after the due date. Each year, we will furnish to each trustee a written statement of certain of our officers certifying that to their knowledge we are in compliance with the indenture and the debt securities, or else specifying any default.

Waiver of Default

The holders of a majority in aggregate principal amount of the relevant series of debt securities may waive a default or event of default for such series of debt securities. If this happens, the default will be treated as if it had not occurred.

Merger or Consolidation

Under the terms of an indenture, we may be permitted to consolidate or merge with another entity. We may also be permitted to sell all or substantially all of our assets to another entity. However, typically we may not take any of these actions unless all the following conditions are met:

if we do not survive such transaction or we convey, transfer or lease our properties and assets substantially as an entirety, the acquiring company must be a corporation, limited liability company, partnership or trust, or other corporate form, organized under the laws of the United States, any state of the United States or the District of Columbia, and such company must agree to be legally responsible for our debt securities;

alternatively, we must be the surviving company;

immediately after the transaction no event of default, or event that, after notice or lapse of time or both, would constitute an event of default, will have occurred or be continuing;

we must deliver certain certificates and documents to the trustee; and

we must satisfy any other requirements specified in the prospectus supplement relating to a particular series of debt securities.

Modification or Waiver

Unless we indicate otherwise in a prospectus supplement, there are three types of changes we may make to an indenture and the debt securities issued thereunder, as described below.

Changes Requiring Approval of Holders

The following is a list of the types of changes that require specific approval of all of the holders of debt securities:

reduce the percentage in principal amount of debt securities of any series whose holders must consent to an amendment, supplement or waiver;

change the stated maturity of the principal of or the time for payment of interest on any debt security;

reduce the principal amount or the rate of interest or any premium payable upon the redemption of any debt security;

change the payment office where any payment on a debt security is payable;

change the currency in which any debt security is payable;

impair the right to bring suit to enforce payment of principal, premium, if any, or interest on or after the maturity of a debt security or, in the case of redemption, on or after the redemption date;

modify the percentage of holders of debt securities whose consent is needed to supplement the indenture or amend a series of debt securities, waive compliance with certain covenants or waive defaults or events of default, other than to increase such percentage or to provide that certain other provisions of the indenture cannot be modified except with the consent of all affected holders;

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change in any manner adverse to the interests of the holders the terms and conditions of the obligations of any guarantors in respect of the due and punctual payment of the principal thereof, premium, if any, and interest thereon, or any additional amounts or any sinking fund or analogous payments; and

impair the rights of holders with respect to any series of debt securities that are exchangeable or convertible to receive payment or delivery of any consideration due upon the conversion or exchange.

The holders of a majority in aggregate principal amount of all of the series of debt securities affected by a certain action, voting together as one class for this purpose, may amend or supplement the indenture or waive our compliance obligations with respect to some of our covenants in that indenture. However, we cannot obtain a waiver of a payment default or of any of the matters covered by the bullet points included above.

Changes Not Requiring Approval

Clarifications and certain other changes that would not adversely affect holders of the outstanding debt securities in any material respect, including the addition of covenants and guarantees, do not require any vote by the holders of outstanding debt securities. We also do not need to obtain any approval from holders to make any change that affects only debt securities to be issued under the indenture after the change takes effect or any changes that are required to comply with the requirements of the SEC or the Trust Indenture Act of 1939.

Further Details Concerning Voting

When taking a vote on proposed changes to the indenture and the debt securities, each holder will be entitled to one vote for each \$1,000 in principal amount of the securities of such series.

Debt securities will not be eligible to vote if they have been fully defeased as described under **Description of Debt Securities** **Defeasance** **Legal Defeasance**.

We generally will be entitled to set any day as a record date for the purpose of determining the holders of outstanding debt securities that are entitled to vote or take other action under the indenture. Any record date must not be more than 90 calendar days nor less than 20 calendar days prior to the proposed date of such vote or action. If we set a record date for a vote or other action to be taken by holders of one or more series, that vote or action may be taken only by persons who are holders of outstanding debt securities of those series on the record date and must be taken within 11 months following the record date.

Book-entry and other indirect holders will need to consult their banks or brokers for information on how approval may be granted or denied if we seek to change the indenture or the debt securities or request a waiver.

Defeasance

The following provisions will be applicable to each series of debt securities unless we state in the applicable prospectus supplement that the provisions of covenant defeasance and legal defeasance will not be applicable to that series.

Covenant Defeasance

We can make the deposit described below and be released from some of the restrictive covenants in the indenture under which the particular series was issued. This is called **covenant defeasance**. In that event, the holders would lose

the protection of those restrictive covenants but would gain the protection of having money and government securities set aside in trust to repay holders' debt securities. In order to achieve covenant defeasance, we must do the following:

we must deposit in trust for the benefit of all holders of such debt securities money, non-callable U.S. government securities, or a combination thereof that will generate enough cash to pay and discharge the principal, premium, if any, and interest on the debt securities on their various due dates;

we must deliver to the trustee a legal opinion of our counsel confirming that, under current U.S. federal income tax law, we may make the above deposit without causing the holders to be taxed on the debt securities any differently than if we did not make the deposit and repaid the debt securities ourselves at maturity; and

we must deliver to the trustee certain documentation stating that all conditions precedent to covenant defeasance have been complied with.

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If we accomplish covenant defeasance, holders can still look to us for repayment of the debt securities if there were a shortfall in the trust deposit or the trustee is prevented from making payment. In fact, if one of the remaining events of default occurs (such as our bankruptcy) and the debt securities become immediately due and payable, there might be a shortfall. Depending on the event causing the default, holders may not be able to obtain payment of the shortfall.

Legal Defeasance

We can make the deposit described below and be legally released from all payment and other obligations on the debt securities of a particular series, which we refer to as legal defeasance. In that event, we and any guarantor shall have been deemed to have been discharged from obligations with respect to such debt securities and related guarantees, respectively. In order to achieve legal defeasance, we must do the following:

we must deposit in trust for the benefit of all holders of such debt securities money, non-callable U.S. government securities, or a combination thereof that will generate enough cash to pay and discharge the principal, premium, if any, and interest on the debt securities on their various due dates;

we must deliver to the trustee a legal opinion confirming that there has been a change in current U.S. federal tax law or an Internal Revenue Service ruling that allows us to make the above deposit without causing the holders to be taxed on the debt securities any differently than if we did not make the deposit and repaid the debt securities ourselves at maturity; and

we must deliver to the trustee a legal opinion and officers' certificate stating that all conditions precedent to legal defeasance have been complied with.

If we accomplish legal defeasance, holders would have to rely solely on the trust deposit for repayment of the debt securities. Holders could not look to us for repayment in the unlikely event of any shortfall. Conversely, the trust deposit would most likely be protected from claims of our lenders and other creditors if we ever became bankrupt or insolvent.

Resignation of Trustee

Each trustee may resign or be removed with respect to one or more series of debt securities provided that a successor trustee is appointed to act with respect to such series. In the event that two or more persons are acting as trustee with respect to different series of debt securities, each of the trustees will be a trustee of a trust separate and apart from the trust administered by any other trustee.

Trustee

We intend to name the indenture trustee for each series of debt securities in the related prospectus supplement.

Certain Considerations Relating to Foreign Currencies

Debt securities denominated or payable in foreign currencies may entail significant risks. These risks include the possibility of significant fluctuations in the foreign currency markets, the imposition or modification of foreign exchange controls and potential illiquidity in the secondary market. These risks will vary depending upon the currency

or currencies involved and will be described in the applicable prospectus supplement.

Governing Law

The indenture and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York.

DESCRIPTION OF RIGHTS

The following is a general description of the terms of the rights we may issue from time to time unless we provide otherwise in the applicable prospectus supplement. Particular terms of any rights we offer will be described in the prospectus supplement relating to such rights.

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General

We may issue rights to purchase common stock, preferred stock, debt securities or units. Rights may be issued independently or together with other securities and may or may not be transferable by the person purchasing or receiving the rights. In connection with any rights offering to our stockholders, we may enter into a standby underwriting, backstop or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. In connection with a rights offering to our stockholders, we would distribute certificates evidencing the rights and a prospectus supplement to our stockholders on or about the record date that we set for receiving rights in such rights offering.

The applicable prospectus supplement will describe the following terms of any rights we may issue, including some or all of the following:

the title and aggregate number of the rights;

the subscription price or a formula for the determination of the subscription price for the rights and the currency or currencies in which the subscription price may be payable;

if applicable, the designation and terms of the securities with which the rights are issued and the number of rights issued with each such security or each principal amount of such security;

the number or a formula for the determination of the number of the rights issued to each stockholder;

the extent to which the rights are transferable;

in the case of rights to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one right;

in the case of rights to purchase common stock or preferred stock, the type of stock and number of shares of stock purchasable upon exercise of one right;

the date on which the right to exercise the rights will commence, and the date on which the rights will expire (subject to any extension);

if applicable, the minimum or maximum amount of the rights that may be exercised at any one time;

the extent to which such rights include an over-subscription privilege with respect to unsubscribed securities;

if applicable, the procedures for adjusting the subscription price and number of shares of common stock or preferred stock purchasable upon the exercise of each right upon the occurrence of certain events, including stock splits, reverse stock splits, combinations, subdivisions or reclassifications of common stock or preferred stock;

the effect on the rights of any merger, consolidation, sale or other disposition of our business;

the terms of any rights to redeem or call the rights;

information with respect to book-entry procedures, if any;

the terms of the securities issuable upon exercise of the rights;

if applicable, the material terms of any standby underwriting, backstop or other purchase arrangement that we may enter into in connection with the rights offering;

if applicable, a discussion of certain U.S. federal income tax considerations; and

any other terms of the rights, including terms, procedures and limitations relating to the exchange and exercise of the rights.

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Exercise of Rights

Each right will entitle the holder to purchase for cash or other consideration such shares of stock or principal amount of securities at the subscription price as shall in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the rights offered thereby. Rights may be exercised as set forth in the applicable prospectus supplement beginning on the date specified therein and continuing until the close of business on the expiration date set forth in the prospectus supplement relating to the rights offered thereby. After the close of business on the expiration date, unexercised rights will become void.

Upon receipt of payment and a subscription certificate properly completed and duly executed at the corporate trust office of the subscription agent or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the securities purchasable upon such exercise. If less than all of the rights represented by such subscription certificate are exercised, a new subscription certificate will be issued for the remaining rights. If we so indicate in the applicable prospectus supplement, holders of the rights may surrender securities as all or part of the exercise price for rights.

We may determine to offer any unsubscribed offered securities directly to stockholders, persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting, backstop or other arrangements, as set forth in the applicable prospectus supplement.

Prior to exercising their rights, holders of rights will not have any of the rights of holders of the securities purchasable upon subscription, including, in the case of rights to purchase common stock or preferred stock, the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding up or to exercise any voting rights or, in the case of rights to purchase debt securities, the right to receive principal, premium, if any, or interest payments, on the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture.

DESCRIPTION OF UNITS

We may issue units comprising one or more securities described in this prospectus in any combination. The following description sets forth certain general terms and provisions of the units that we may offer pursuant to this prospectus. The particular terms of the units and the extent, if any, to which the general terms and provisions may apply to the units so offered will be described in the applicable prospectus supplement.

Each unit will be issued so that the holder of the unit also is the holder of each security included in the unit. Thus, the unit will have the rights and obligations of a holder of each included security. Units will be issued pursuant to the terms of a unit agreement, which may provide that the securities included in the unit may not be held or transferred separately at any time or at any time before a specified date. A copy of the forms of the unit agreement and the unit certificate relating to any particular issue of units will be filed with the SEC each time we issue units, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the unit agreement and the related unit certificate, see [Where You Can Find More Information](#).

The prospectus supplement relating to any particular issuance of units will describe the terms of those units, including, to the extent applicable, the following:

the designation and terms of the units and the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

any provision for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and

whether the units will be issued in fully registered or global form.

SELLING STOCKHOLDERS

The following table sets forth the identity of each of the selling stockholders, the number of shares of our common stock and the percentage of shares of our common stock beneficially owned by each of the selling stockholders prior to this offering, the number of shares that may be offered under this prospectus by each of the selling stockholders, and the number of shares of our common stock and the percentage of our common stock to be beneficially owned by each of the selling stockholders after the completion of this offering, assuming that all shares offered hereunder are sold as contemplated herein. The number of shares in the column Maximum number of shares that may be offered represents all of the shares that each of the selling stockholders may offer under this prospectus.

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Beneficial ownership is determined in accordance with SEC rules. The information is not necessarily indicative of beneficial ownership for any other purpose. In general, under these rules a beneficial owner of a security includes any person who, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise has or shares voting power or investment power with respect to such security. A person is also deemed to be a beneficial owner of a security if that person has the right to acquire beneficial ownership of such security within 60 days. To our knowledge, except as otherwise indicated, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock beneficially owned by that person.

For purposes of the table below, the beneficial ownership amounts and percentages are based on a total of 32,308,644 shares of our common stock outstanding as of August 3, 2018. Shares of our common stock that a person has the right to acquire within 60 days of the date of this prospectus are deemed outstanding for purposes of computing the percentage ownership of such person's holdings, but are not deemed outstanding for purposes of computing the percentage ownership of any other person.

We do not know when or in what amounts the selling stockholders may sell or otherwise dispose of the shares covered hereby. The selling stockholders might not sell any or all of the shares covered by this prospectus or may sell or dispose of some or all of their shares in transactions exempt from the registration requirements of the Securities Act, or in the open market after the date on which they provided the information set forth in the table below. Because the selling stockholders may not sell or otherwise dispose of some or all of the shares covered by this prospectus and because there are currently no agreements, arrangements or understandings with respect to the sale or other disposition of any of the shares, we cannot estimate the number of the shares that will be held by the selling stockholders after completion of a potential offering. For purposes of the table below, we have assumed that the selling stockholders will have sold all of the shares covered by this prospectus upon completion of the applicable offering.

Information about additional selling stockholders, if any, including their identities and the common stock 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 stockholders 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. The address of each beneficial owner listed in the table below is 1701 Pennsylvania Ave., NW, Suite 900, Washington, DC 20006.

	Common stock beneficially owned					
	Shares beneficially owned prior to this offering		Maximum number of shares that may be offered	Shares beneficially owned after this offering		
	Number	Percentage		Number	Percentage	
Entities Affiliated with Allan M. Fox ⁽¹⁾	3,043,568	9.42%	3,043,568	0	0%	
Entities Affiliated with John Daniel Kiser ⁽²⁾	2,013,890	6.23%	2,013,890	0	0%	

(1) Entities include The Allan M. Fox Trust (U/A/D April 21, 2015) (the Fox Trust), The Allan M. Fox Revocable Trust (the Fox Revocable Trust) and MAPES. Mr. Kiser is the trustee of the Fox Trust and holds sole investment

power over such trust. Mr. Fox holds sole investment power over the shares held by the Fox Revocable Trust and the shares held by MAPES. Mr. Fox is a member of our board of directors and Mr. Kiser is a former member of our board of directors. The amount reflected does not include 948,157 shares held by the Kiser Gift Trust, for which Mr. Fox serves as co-trustee as described in footnote (2).

- (2) Entities include The Kiser 2012 Gift Trust (the Kiser Gift Trust), The John Daniel Kiser Revocable Trust U/A/D July 27, 2011 (the Kiser Revocable Trust) and The Kiser 2018 Grantor Retained Annuity Trust (the Kiser Retained Annuity Trust). Mr. Fox is co-trustee of the Kiser Gift Trust and holds shared investment power over such trust. Mr. Kiser holds sole investment power over the shares held by the Kiser Revocable Trust. Ellen G. Kiser, the wife of Mr. Kiser, holds sole investment power over the shares held by the Kiser Retained Annuity Trust. The amount reflected does not include 722,485 shares held by the Fox Trust, for which Mr. Kiser serves as trustee as described in footnote (1).

PLAN OF DISTRIBUTION

From time to time, we or the selling stockholders may sell the securities offered by this prospectus in any one or more of the following ways:

to or through one or more underwriters, dealers or agents;

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in short or long transactions;

through put or call option transactions relating to our common stock;

directly to agents or other purchasers;

in at the market offerings within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;

though a combination of any such methods of sale; or

through any other method described in the applicable prospectus supplement.

The securities may be distributed from time to time in one or more transactions at:

a fixed price or prices, which may be changed;

market prices prevailing at the time of sale;

prices related to the prevailing market price; or

negotiated prices.

The applicable prospectus supplement will set forth the method of distribution and the terms and conditions of the offering of such securities, including:

the terms of the offering;

the names of any underwriters, dealers or agents;

the name or names of any managing underwriter or underwriters;

the purchase price of the securities and the proceeds to us from the sale;

any over-allotment or other options under which the underwriters may purchase additional shares of common stock from us;

any underwriting discounts, concessions, commissions or agency fees and other items constituting compensation to underwriters, dealers or agents;

any discounts or concessions allowed or re-allowed or paid by underwriters or dealers to other dealers;

any delayed delivery arrangements;

estimated offering expenses; or

any securities exchange or market on which the securities offered in the prospectus supplement may be listed. We may issue to our existing security holders, through a dividend or similar distribution, rights to purchase shares of our common stock or preferred stock, debt securities or units, which may or may not be transferable. In any distribution of rights to our existing security holders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties. The applicable prospectus supplement will describe the specific terms of any offering of our common stock or preferred stock through the issuance of rights, including, if applicable, the material terms of any standby underwriting or purchase arrangement.

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Sale Through Underwriters or Dealers

If we or the selling stockholders use underwriters for a sale of securities, the underwriters will acquire the securities for their own account for resale to the public, either on a firm commitment basis or a best efforts basis. The underwriters may resell the securities in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Underwriters may offer the securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. If an underwriter or underwriters are used in the sale of securities hereunder, an underwriting agreement will be executed with the underwriter or underwriters or their representatives at the time an agreement for sale is reached. Unless we inform you otherwise in the applicable prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions. The underwriters may change from time to time any public offering price and any discounts or concessions allowed or reallocated or paid to dealers.

During and after an offering through underwriters, the underwriters may purchase and sell the securities in the open market. These transactions may include overallotment and stabilizing transactions and purchases to cover syndicate short positions created in connection with the offering. The underwriters may also impose a penalty bid, which means that selling concessions allowed to syndicate members or other broker-dealers for the offered securities sold for their account may be reclaimed by the syndicate if the offered securities are repurchased by the syndicate in stabilizing or covering transactions. These activities may stabilize, maintain or otherwise affect the market price of the offered securities, which may be higher than the price that might otherwise prevail in the open market. If commenced, the underwriters may discontinue these activities at any time.

Some or all of the securities that we offer through this prospectus may be new issues of securities with no established trading market. Any underwriters to whom we sell our securities for public offering and sale may make a market in those securities, but they will not be obligated to do so and they may discontinue any market making at any time without notice. Accordingly, we cannot assure you of the liquidity of, or continued trading markets for, any securities that we offer.

If dealers are used for the sale of securities, we or the selling stockholders, or an underwriter, will sell the securities to them as principals. The dealers may then resell those securities to the public at varying prices determined by the dealers at the time of resale. We will include in the applicable prospectus supplement the names of the dealers and the terms of the transaction.

Underwriters, dealers and agents that participate in the distribution of the securities may be underwriters as defined in the applicable securities laws and any discounts or commissions they receive from us or the selling stockholders and any profit on their resale of the securities may be treated as underwriting discounts and commissions under the applicable securities laws. We will identify in the applicable prospectus supplement any underwriters, dealers or agents and will describe their compensation. We or the selling stockholders may have agreements with the underwriters, dealers and agents to indemnify them against specified civil liabilities, including liabilities under the applicable securities laws.

Direct Sales and Sales Through Agents

We or the selling stockholders may also sell the securities through agents designated from time to time. In the applicable prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will describe any commissions payable to the agent. Unless we inform you otherwise in the applicable prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its

appointment.

We or the selling stockholders may sell the securities directly in transactions not involving underwriters, dealers or agents.

We or the selling stockholders may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. We will describe the terms of any such sales in the prospectus supplement.

Delayed Delivery Contracts

If the prospectus supplement indicates, we may authorize underwriters, dealers or agents to solicit offers from certain types of institutions to purchase securities at the public offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to those conditions described in the prospectus supplement. The applicable prospectus supplement will describe the commission payable for solicitation of those contracts.

Market Making, Stabilization and Other Transactions

Unless the applicable prospectus supplement states otherwise, all preferred stock, debt securities, warrants, rights and units will be new issues of securities with no established trading market. Unless indicated in the applicable prospectus supplement, we do not expect to list the offered securities on a securities exchange, except for our common stock, which is listed on The Nasdaq Global Select Market. Any underwriters that we use in the sale of offered securities may make a market in such securities, but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

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Any underwriter may also engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Rule 104 of Regulation M under the Exchange Act. Stabilizing transactions involve bids to purchase the underlying security in the open market for the purpose of preventing or retarding a decline in the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions. 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 stabilizing or syndicate covering transaction to cover syndicate short positions.

Stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our securities or preventing or retarding a decline in the price of our securities. As a result, the price of the securities in the open market may be higher than it would otherwise be in the absence of these transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

Hedging

We or the selling stockholders may enter into hedging transactions with broker-dealers and the broker-dealers may engage in short sales of the securities in the course of hedging the positions they assume with us or the selling stockholders, including, without limitation, in connection with distributions of the securities by those broker-dealers. We or the selling stockholders may enter into option or other transactions with broker-dealers that involve the delivery of the securities offered hereby to the broker-dealers, who may then resell or otherwise transfer those securities. We or the selling stockholders may also loan or pledge the securities offered hereby to a broker-dealer and the broker-dealer may sell the securities offered hereby so loaned or upon a default may sell or otherwise transfer the pledged securities offered hereby.

Electronic Auctions

We may make sales through the Internet or through other electronic means. Since we may from time to time elect to offer securities directly to the public, with or without the involvement of agents, underwriters or dealers, utilizing the Internet or other forms of electronic bidding or ordering systems for the pricing and allocation of such securities, you will want to carefully review the description of that system, which we will provide in a prospectus supplement.

Such electronic system may allow bidders to directly participate, through electronic access to an auction site, by submitting conditional offers to buy that are subject to acceptance by us, and which may directly affect the price or other terms and conditions at which such securities are sold. These bidding or ordering systems may present to each bidder, on a so-called real-time basis, relevant information to assist in making a bid, such as the clearing spread at which the offering would be sold, based on the bids submitted, and whether a bidder's individual bids would be accepted, prorated or rejected. For example, in the case of debt security, the clearing spread could be indicated as a number of basis points above an index treasury note.

Upon completion of such an electronic auction process, securities will be allocated based on prices bid, terms of bid or other factors. The final offering price at which securities would be sold and the allocation of securities among bidders would be based in whole or in part on the results of the Internet or other electronic bidding process or auction.

General Information

Underwriters, dealers and agents may engage in transactions with or perform services for us in the ordinary course of their businesses for which they may receive customary fees and reimbursement of expenses. We or the selling stockholders may have a material relationship with the underwriters, dealers or agents. We will describe the nature of

such relationship in the applicable prospectus supplement.

Under the securities laws of some states, the securities offered by this prospectus may be sold in those states only through registered or licensed brokers or dealers. The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

Underwriters, dealers and agents may be entitled, under agreements entered into with us, to be indemnified by us against certain liabilities, including liabilities under the Securities Act. Our underwriters, dealers and agents, or their affiliates, may be customers of, engage in transactions with or perform services for us, in the ordinary course of business.

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LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Covington & Burling LLP, Washington, D.C. Counsel for any underwriters, dealers or agents will be named in the applicable prospectus supplement.

EXPERTS

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2017 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.

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\$175,000,000

REGENXBIO Inc.

Common Stock

PROSPECTUS SUPPLEMENT

Morgan Stanley

**BofA Merrill Lynch
Raymond James
August , 2018**

Barclays