PROSPECTUS



42,137,548 Shares Common Stock Offered by the Selling Securityholders

This prospectus relates to the proposed resale or other disposition of up to an aggregate of 42,137,548 shares of common stock, par value \$0.001 per share ("common stock"), by the selling securityholders identified in this prospectus, of which (i) 9,013,834 shares are presently issued and outstanding, (ii) 24,696,206 shares are issuable upon exercise of presently issued and outstanding pre-funded warrants to purchase common stock and (iii) 8,427,508 shares are issuable upon exercise of presently issued and outstanding common warrants to purchase common stock, from time to time in one or more offerings. This prospectus provides you with a general description of the securities. We are not selling any shares of our common stock under this prospectus and will not receive any proceeds from the sale of our common stock by the selling securityholders.

Each time any of the selling securityholders offers and sells securities, such selling securityholders may provide a supplement to this prospectus that contains specific information about the offering and the amounts, prices and terms of the securities. The supplement may also add, update or change information contained or incorporated by reference in this prospectus with respect to that offering. You should carefully read this prospectus and the applicable prospectus supplement before you invest in any of our securities.

The selling securityholders, together or separately, may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the sections of this prospectus titled "About this Prospectus" and "Plan of Distribution" for more information. No securities may be sold without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE THE SECTION TITLED "RISK FACTORS" ON PAGE 5 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "ANNX." On November 15, 2022, the last reported sale price of our common stock on the Nasdaq Global Select Market was \$6.02 per share.

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 November 16, 2022.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the "SEC"), using a "shelf" registration process. By using a shelf registration statement, the selling securityholders may, from time to time, sell up to 42,137,548 shares of common stock in one or more offerings as described in this prospectus. In connection with the offer and sale of securities by the selling securityholders, the selling securityholders may provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. Any such prospectus supplement or free writing prospectus may also add, update or change information contained or incorporated by reference in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable. Before purchasing any securities, you should carefully read both this prospectus and any applicable prospectus supplement or free writing prospectuses, together with the additional information described under the section titled "Where You Can Find More Information; Incorporation by Reference."

Neither we, nor the selling securityholders, have authorized anyone to provide you with any information or to make any representations other than those contained or incorporated by reference in this prospectus, any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the selling securityholders take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the selling securityholders will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus and any applicable prospectus supplement to this prospectus is accurate only as of the date on its respective cover, that the information appearing in any applicable free writing prospectus is accurate only as of the date of that free writing prospectus, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any prospectus supplement or any applicable free writing prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the section titled "Risk Factors" contained in this prospectus, any applicable prospectus supplement and any applicable free writing prospectus, and under similar sections in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

When we refer to "ANNX," "we," "our," "us" and the "Company" in this prospectus, we mean Annexon, Inc. and its consolidated subsidiary, unless otherwise specified. When we refer to "you," we mean the potential holders of the applicable series of securities.

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

We file reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is http://www.sec.gov.

Our corporate website address is www.annexonbio.com. The information on our website, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement or documents incorporated by reference in the registration statement. Statements in this prospectus or any prospectus supplement or any related free writing prospectus that we may provide about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the SEC on March 1, 2022.
- the information specifically incorporated by reference into our Annual Report on <u>Form 10-K</u> for the year ended December 31, 2021 from our Definitive Proxy Statement on <u>Schedule 14A</u> filed with the SEC on April 27, 2022.
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2022, June 30, 2022 and September 30, 2022 filed with the SEC on May 9, 2022, August 8, 2022 and November 3, 2022, respectively.
- our Current Reports on Form 8-K filed with the SEC on <u>January 4, 2022</u>, <u>January 20, 2022</u> (Item 5.02 only), <u>February 3, 2022</u>, <u>February 22, 2022</u>, <u>April 7, 2022</u>, <u>June 7, 2022</u>, <u>June 10, 2022</u> and <u>July 8, 2022</u>.
- the description of our common stock, which is contained in a registration statement on Form 8-A filed with the SEC on July 21, 2020 (File No. 001-39402) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment or report filed for the purpose of updating such description.

All reports and other documents 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, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, 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 date of the filing of such reports and documents.

You may request a free copy of any of the documents incorporated by reference in this prospectus by writing or telephoning us at the following address:

Annexon, Inc.
1400 Sierra Point Parkway, Bldg C, Suite 200
Brisbane, California 94005
(650) 822-5500
Attention: Investor Relations

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus or any accompanying prospectus supplement.

THE COMPANY

We are a clinical-stage biopharmaceutical company pioneering a new class of complement medicines for patients with classical complement-mediated autoimmune, neurodegenerative and ophthalmic disorders. The classical complement pathway is a core component to the body's immune system that activates a powerful inflammatory cascade. We believe that by stopping the classical complement pathway at its start, our approach may have the potential to provide more complete protection against complement-mediated disorders of the body, brain and eye.

Our proprietary platform targets C1q, the initiating molecule of the classical complement pathway. Our product candidates are designed to block the early classical cascade and all downstream pathway components and their tissue-damaging functions. Our goal is to suppress excessive or aberrant classical complement activity that contributes to chronic inflammation and tissue damage to slow or even halt disease progression, while preserving the beneficial immune functions of the lectin and alternative complement pathways involved in the clearance of pathogens and damaged cells.

We were incorporated under the laws of the State of Delaware on March 3, 2011. Our principal executive offices are located at 1400 Sierra Point Parkway, Bldg C, Suite 200, Brisbane, California 94005, and our telephone number is (650) 822-5500. Our corporate website address is www.annexonbio.com. Information contained on, or accessible through, our website shall not be deemed incorporated into and is not a part of this prospectus or the registration statement of which it forms a part. We have included our website in this prospectus solely as an inactive textual reference. Because (i) the aggregate worldwide market value of our voting common stock held by non-affiliates ("public float") exceeded \$700 million on June 30, 2021, (ii) we had been subject to the reporting requirements of Section 13(a) or 15(d) of the Exchange Act for at least twelve calendar months, (iii) we had previously filed an annual report under Section 13(a) or 15(d) of the Exchange Act and (iv) we were not eligible for smaller reporting company status because we exceeded the public float and revenue threshold for such status, we qualified as a "large accelerated filer" under Rule 12b-2 of the Exchange Act as of the end of the 2021 fiscal year and for the 2022 fiscal year. As of June 30, 2022, we re-qualified as a smaller reporting company. As a smaller reporting company, we are entitled to take advantage of exemptions from certain disclosure requirements, including the presentation of only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. In addition, as a smaller reporting company with less than \$100 million in annual revenue, we are exempt from the requirement to obtain an auditor attestation on the effectiveness of our internal control over financial reporting provided in Section 404(b) of the Sarbanes-Oxley Act of 2002.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus and any applicable prospectus supplement involves risks. You should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q, and any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q or Current Reports on Form 8-K we file after the date of this prospectus, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in any applicable prospectus supplement and any applicable free writing prospectus before making a decision about investing in our securities. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of common stock being offered by any of the selling securityholders.

We will receive proceeds from the exercise of the warrants for cash, if any, but not from the sale of the shares of common stock issuable upon such exercise. Unless otherwise disclosed in a prospectus supplement, we intend to use any net proceeds from the exercise of warrants for cash to fund the continued development of our clinical product candidates, research and development efforts related to our earlier stage pipeline and working capital and other general corporate purposes.

DESCRIPTION OF SECURITIES

The following summary describes our securities and the material provisions of our amended and restated certificate of incorporation and our amended and restated bylaws, the amended and restated investors' rights agreement to which we and certain of our stockholders are parties and of the Delaware General Corporation Law (the "DGCL"). Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and amended and restated investors' rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is part.

General

Our authorized capital stock consists of 300,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share.

Common Stock

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. The election of directors by our stockholders shall be determined by a plurality of the votes cast and our stockholders do not have cumulative voting rights in the election of directors. Other matters shall be generally decided by the affirmative vote of the holders of a majority of the votes cast (excluding abstentions and broker non-votes) on such matter. In addition, the affirmative vote of holders of 66 2/3% of the voting power of all of the then outstanding voting stock will be required to take certain actions, including amending certain provisions of our amended and restated certificate of incorporation, including the provisions relating to amending our amended and restated bylaws, the classified board and director liability.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive dividends as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are fully paid and nonassessable.

Preferred Stock

Our board of directors has the authority, without further action by our stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of our common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action.

Warrants

On July 7, 2022, we entered into a securities purchase agreement with certain purchasers named therein, pursuant to which we sold 9,013,834 shares of our common stock, pre-funded warrants to purchase up to 24,696,206 shares of our common stock (the "pre-funded warrants") and accompanying common warrants to purchase up to 8,427,508 shares of our common stock (the "common warrants," and together with the pre-funded warrants, the "warrants").

As of November 3, 2022, pre-funded warrants to purchase up to 24,696,206 shares of our common stock and common warrants to purchase up to 8,427,508 shares of our common stock were outstanding.

The material terms and provisions of the warrants to purchase shares of common stock are summarized below. This summary is subject to and qualified in its entirety by the form of pre-funded warrant and form of common warrant, each of which was filed with the SEC as an exhibit to our Current Report on Form 8-K on July 8, 2022.

Pre-Funded Warrants

The pre-funded warrants have an exercise price of \$0.001 per share of common stock and are exercisable until exercised in full. The exercise price and number of shares of common stock issuable upon exercise of the pre-funded warrants may be adjusted in certain circumstances, including in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting shares of common stock. However, the exercise price of the pre-funded warrants will not be adjusted below the par value of the common stock.

We issued the pre-funded warrants in certificated form. A holder of a pre-funded warrant certificate may exercise such pre-funded warrant with the notice of exercise form attached to the pre-funded warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price for the number of pre-funded warrants being exercised.

Under the terms of the pre-funded warrants, we may not effect the exercise of any pre-funded warrant, and a holder will not be entitled to exercise any portion of any pre-funded warrant, which, upon giving effect to such exercise, would cause: (i) the aggregate number of shares of common stock beneficially owned by such holder (together with its affiliates) to exceed 9.99% of the total number of shares of our common stock outstanding immediately after giving effect to the exercise or (ii) the combined voting power of our securities beneficially owned by such holder (together with its affiliates) to exceed 9.99% of the combined voting power of all of our securities immediately outstanding after giving effect to the exercise (the "Pre-Funded Warrant Beneficial Ownership Limitation"); provided, however, that upon notice to us, the holder may increase or decrease the Pre-Funded Warrant Beneficial Ownership

Limitation to any percentage not in excess of 19.99% and any increase or decrease in the Pre-Funded Warrant Beneficial Ownership Limitation will not be effective until 61 days after such notice is delivered by the holder to us.

The holders of the pre-funded warrants must pay the exercise price upon exercise of the pre-funded warrants, unless such holders are utilizing the cashless exercise provision of the pre-funded warrants. The pre-funded warrants may be exercised at such time by means of a "cashless exercise" in which the holder of such pre-funded warrants shall be entitled to receive that number of pre-funded warrant shares determined according to the following formula:

 $Y^*[[(A-B)/(A)]$

Where:

Y = the number of shares of common stock with respect to which the pre-funded warrant is then being exercised;

A = the Closing Sale Price (as defined below) as of the trading day immediately preceding the date of such exercise; and

B = the exercise price then in effect.

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

In the event of certain fundamental transactions (as described in the pre-funded warrants), a holder of pre-funded warrants will be entitled to receive, upon exercise of the pre-funded warrants, the kind and amount of securities, cash or other property that such holder would have received had they exercised the pre-funded warrants immediately prior to such fundamental transaction without regard to any limitations on exercise contained in the pre-funded warrants.

Common Warrants

The common warrants have an exercise price of \$5.806875 per share of common stock and are exercisable until 5:00 p.m., New York City time, on June 30, 2025. The exercise price and number of shares of common stock issuable upon exercise of the common warrants may be adjusted in certain circumstances, including in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting shares of common stock. However, the exercise price of the common warrants will not be adjusted below the par value of the common stock.

We issued the common warrants in certificated form. A holder of a common warrant certificate may exercise such common warrant, in whole or in part, with the notice of exercise form attached to the common warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price for the number of common warrants being exercised.

Under the terms of the common warrants, we may not effect the exercise of any common warrant, and a holder will not be entitled to exercise any portion of any common warrant, which, upon giving effect to such exercise, would cause the holder (together with its affiliates) to beneficially own a number of shares of our common stock in excess of 4.99%, 9.99% or 19.99% (the percentage that was elected by each holder prior to the issuance of the common warrants) of the number of shares of our common stock then outstanding after giving effect to such exercise (the "Common Warrant Beneficial Ownership Limitation"); provided, however, that upon notice to us, the holder may increase or decrease the Common Warrant Beneficial Ownership Limitation to any other percentage not in excess of 19.99% and any increase in the Common Warrant Beneficial Ownership Limitation will not be effective until 61 days after such notice is delivered by the holder to us.

The holders of the common warrants must pay the exercise price by wire transfer upon exercise of the common warrants. If at any time there is no effective registration statement registering, or the prospectus contained therein is not available for, the resale of the shares of common stock underlying the common warrants by the holder, then the common warrants may be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the holder of such common warrants shall be entitled to receive that number of common warrant shares determined according to the following formula:

 $\frac{[(\underline{A}-\underline{B})^*(\underline{X})]}{(A)}$

Where:

A = as applicable: (i) the VWAP (as defined below) on the trading day immediately preceding the date of such exercise if the applicable notice of exercise is (1) both executed and delivered on a day that is not a trading day or (2) both executed and delivered on a trading day prior to the opening of "regular trading hours" (as defined in Rule 600(b) of Regulation NMS under the federal securities laws) on such trading day, (ii) at the option of the holder, either (y) the VWAP on the trading day immediately preceding the date of such exercise or (z) the bid price of the common stock on the Trading Market (as defined below) as reported by Bloomberg as of the time of the holder's execution of the applicable notice of exercise if such notice of exercise is executed during "regular trading hours" on a trading day and is delivered within two hours thereafter (including until two hours after the close of "regular trading hours" on a trading day) or (iii) the VWAP on the date of exercise if the date of the applicable notice of exercise is a trading day and such notice of exercise is both executed and delivered after the close of "regular trading hours" on such trading day:

B = the exercise price then in effect; and

X = the number of shares of common stock that would be issuable upon exercise of the common warrant in accordance with the terms of the common warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

As used above, the "VWAP" means, for any date, the price determined by the first of the following clauses that applies: (i) if our common stock is then listed on the Nasdaq Global Select Market, the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the New York Stock Exchange, QTCQB or QTCQX (or any of the successors to any of the foregoing) (such market, the

"Trading Market"), the daily volume-weighted average price of our common stock for such date (or the nearest preceding date) on the Trading Market as reported by Bloomberg (based on a "Trading Day" from 9:30 a.m. New York City time to 4:02 p.m. New York City time), (ii) if OTCQB or OTCQX is not a Trading Market, the volume-weighted average price of our common stock for such date (or the nearest preceding date) on OTCQB or OTCQX, as applicable, (iii) if our common stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for our common stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of our common stock so reported or (iv) in all other cases, the fair market value of a share of our common stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the warrants then outstanding and reasonably acceptance to us, the fees and expenses of which shall be paid by us.

In the event of certain fundamental transactions (as described in the common warrants), a holder of common warrants will be entitled to receive, upon exercise of the common warrants, the kind and amount of securities, cash or other property that such holder would have received had they exercised the common warrants immediately prior to such fundamental transaction without regard to any limitations on exercise contained in the common warrants.

We do not intend to apply for listing of the pre-funded warrants or the common warrants on any securities exchange or other trading system.

Registration Rights

Under our amended and restated investors' rights agreement, certain holders of shares of our common stock, or their transferees, have the right to require us to register their shares under the Securities Act of 1933, as amended (the "Securities Act"), so that those shares may be publicly resold, and certain holders of shares of our common stock, or their transferees, have the right to include their shares in any registration statement we file, in each case as described below.

Demand Registration Rights

Certain holders of shares of our common stock are entitled to certain demand registration rights. The holders of at least 60% of such registrable securities may, on not more than two occasions, request that we register all or a portion of their shares, subject to certain specified exceptions.

Piggyback Registration Rights

In the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, certain holders of registrable securities will be entitled to certain "piggyback" registration rights allowing them to include their shares in such registration, subject to specified conditions and limitations.

S-3 Registration Rights

Certain holders of shares of our common stock are entitled to certain Form S-3 registration rights. The holders of at least 30% of such registrable securities may, on not more than two registrations on Form S-3 within any 12-month period, request that we register all or a portion of their shares on Form S-3 if we are qualified to file a registration statement on Form S-3, subject to specified exceptions. Such request for registration on Form S-3 must cover securities with an aggregate offering price which equals or exceeds \$1.0 million, net of selling expenses. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

Termination of Registration Rights

The registration rights terminate upon the earliest of (i) such date on which all shares of the registrable securities held by such securityholder may immediately be sold under Rule 144 under the Securities Act during any 90-day period or (ii) July 28, 2025.

Private Placement Registration Rights

We have also agreed to use commercially reasonable efforts to file a registration statement with the SEC by no later than November 8, 2022 to register for resale under the Securities Act all of the shares of our common stock issued and shares of our common stock issuable upon exercise of the pre-funded warrants and the common warrants issued, in each case, pursuant to a securities purchase agreement dated July 7, 2022, and we have further agreed to use commercially reasonable efforts to cause such registration statement to be declared effective within the earlier of (i) December 8, 2022 (or January 7, 2023 if the SEC reviews the registration statement) and (ii) the 10th business day after we are notified by the SEC that the registration statement will not be reviewed or will not be subject to further comments from the SEC. This registration statement on Form S-3 is being filed with the SEC in accordance with the aforementioned obligations.

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

Certain provisions of Delaware law and our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected 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 increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited 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 Anti-Takeover Statute

We are subject to Section 203 of the DGCL, which prohibits persons deemed "interested stockholders" from engaging in a "business combination" with a publicly-held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors, such as discouraging takeover attempts that might result in a premium over the market price of our common stock.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to effect a change in control of our company. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Special Stockholder Meetings

Our amended and restated certificate of incorporation provide that a special meeting of stockholders may be called at any time by our board of directors, but such special meetings may not be called by the stockholders or any other person or persons.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals 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.

Stockholder Action by Written Consent

Our amended and restated certificate of incorporation precludes stockholder action by written consent without a meeting.

Classified Board; Election and Removal of Directors; Filling Vacancies

Our board of directors is divided into three classes, divided as nearly as equal in number as possible. The directors in each class serve for a three-year term, one class being elected each year by our stockholders, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors. Our amended and restated certificate of incorporation provides for the removal of any of our directors only for cause and requires a stockholder vote by the holders of at least a 66 2/3% of the voting power of the then outstanding voting stock. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of the board, may only be filled by a resolution of the board of directors unless the board of directors determines that such vacancies shall be filled by the stockholders. This system of electing and removing directors and filling vacancies may tend to 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.

Choice of Forum

Our amended and restated certificate of incorporation and amended and restated bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: any derivative action or proceeding brought on our behalf; any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or stockholders to us or to our stockholders; any action asserting a claim against us arising pursuant to the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws (as either may be amended from time to time); or any action asserting a claim against us that is governed by the internal affairs doctrine. As a result, any action brought by any of our stockholders with regard to any of these matters will need to be filed in the Court of Chancery of the State of Delaware and cannot be filed in any other jurisdiction; provided that, the exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction; and provided further that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our amended and restated certificate of incorporation and amended and restated bylaws also provide that the federal district courts of the United States of America will be the exclusive forum

for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees or agents and arising under the Securities Act. Nothing in our amended and restated certificate of incorporation and amended and restated bylaws preclude stockholders that assert claims under the Exchange Act from bringing such claims in state or federal court, subject to applicable law.

If any action the subject matter of which is within the scope described above is filed in a court other than a court located within the State of Delaware ("Foreign Action"), in the name of any stockholder, such stockholder shall be deemed to have consented to 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 applicable provisions of our amended and restated certificate of incorporation and amended and restated bylaws and 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. Although our amended and restated certificate of incorporation and amended and restated bylaws contain the choice of forum provision described above, it is possible that a court could find that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder.

Amendment of Charter Provisions

The amendment of any of the above provisions in our amended and restated certificate of incorporation, except for the provision making it possible for our board of directors to issue undesignated preferred stock, requires approval by a stockholder vote by the holders of at least a 66 2/3% of the voting power of the then outstanding voting stock.

The provisions of the DGCL, our amended and 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 our 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.

Limitation on Liability and Indemnification

Our amended and restated certificate of incorporation and our amended and restated bylaws limit our directors' liability, contain provisions that provide that we may indemnify our directors and officers to the fullest extent permitted under the DGCL. The DGCL provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability for any:

- transaction from which the director derives an improper personal benefit;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares; or
- breach of a director's duty of loyalty to the corporation or its stockholders.

These limitations of liability do not apply to liabilities arising under federal securities laws and do not affect the availability of equitable remedies such as injunctive relief or recession.

The DGCL and our amended and restated bylaws provide that we will, in certain situations, indemnify our directors and officers and may indemnify other employees and other agents, to the fullest extent permitted by law. Any indemnified person is also entitled, subject to certain limitations, to advancement, direct payment or reimbursement of reasonable expenses (including attorneys' fees and disbursements) in advance of the final disposition of the proceeding.

In addition, we have entered, and intend to continue to enter, into separate indemnification agreements with our directors and officers. These indemnification agreements, among other things, require us to indemnify our directors and officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as a director or officer, or any other company or enterprise to which the person provides services at our request.

We also maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers.

We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and these indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or control persons, in the opinion of the SEC, such indemnification is against public policy, as expressed in the Securities Act and is therefore unenforceable.

Listing

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

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare, Inc. The transfer agent and registrar's address is 150 Royall Street, Suite 101, Canton, Massachusetts 02021.

SELLING SECURITYHOLDERS

This prospectus relates to the possible resale by certain of the selling securityholders from time to time of up to an aggregate of 42,137,548 shares of common stock, which consists of (i) 9,013,834 shares of common stock and (ii) warrants (as defined below) to purchase up to 33,123,714 shares of common stock issued and sold in the private placement described below. The term "selling securityholders" includes donees, pledgees, transferees, assignees or other successors in interest selling securities received after the date of this prospectus from a selling securityholder as a gift, pledge, partnership distribution or other transfer.

On July 7, 2022, we entered into a securities purchase agreement with the selling securityholders, pursuant to which we sold in a private placement (i) 9,013,834 shares of common stock, (ii) pre-funded warrants to purchase up to 24,696,206 shares of common stock and (iii) accompanying warrants to purchase up to 8,427,508 shares of common stock for an aggregate purchase price of \$130.5 million.

The following table sets forth information concerning the shares of common stock that may be offered from time to time by each selling securityholder. The number of shares beneficially owned by each selling securityholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which the selling securityholder has sole or shared voting power or investment power. Percentage ownership is based on 47,630,393 shares of common stock outstanding as of October 31, 2022. In computing the number of shares beneficially owned by a selling securityholder and their percentage ownership, shares of common stock subject to options, warrants or other rights held by such selling securityholder that are currently exercisable or will become exercisable within 60 days of October 31, 2022 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other selling securityholder. For purposes of this table, we have assumed that the selling securityholders will have sold all of the securities covered by this prospectus upon the completion of the offering (including all shares of common stock issuable upon exercise of the warrants). Each of the selling securityholders listed has sole voting and investment power with respect to the shares beneficially owned by the selling securityholder unless noted otherwise.

The information in the following table has been provided to us by or on behalf of the selling securityholders and the selling securityholders may have sold, transferred or otherwise disposed of all or a portion of their securities after the date on which they provided us with information regarding their securities. A selling securityholder may sell all, some or none of its securities in this offering. See the section titled "Plan of Distribution."

on Stock Ily Owned letion of this ering
Percentage
3.1%
4.9%
2.1%
4.3%
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a

Consists of (i) 1,844,834 shares of common stock, 1,836,098 shares of common stock issuable upon the exercise of pre-funded warrants and 688.537 shares of common stock issuable upon the exercise of common warrants held by Venrock Healthcare Capital Partners EG, L.P. ("VHCP EG"), (ii) 920,695 shares of common stock, 679,109 shares of common stock issuable upon the exercise of pre-funded warrants and 254,666 shares of common stock issuable upon the exercise of common warrants held by Venrock Healthcare Capital Partners III, L.P. ("VHCP III") and (iii) 92,072 shares of common stock, 67,937 shares of common stock issuable upon the exercise of pre-funded warrants and 25,476 shares of common stock issuable upon the exercise of common warrants held by VHCP Co-Investment Holdings III, LLC ("VHCP III Co"). VHCP Management EG, LLC ("VHCPM EG") is the sole general partner of VHCP EG. VHCP Management III, LLC ("VHCPM III") is the sole general partner of VHCP III and the sole manager of VHCP III Co. Bong Koh and Nimish Shah are the voting members of VHCPM EG and VHCPM III. Dr. Koh, Mr. Shah, VHCPM EG and VHCPM III disclaim beneficial ownership over all shares held by VHCP EG, VHCP III and VHCP III Co, except to the extent of their respective indirect pecuniary interests therein. Pursuant to the terms of the pre-funded warrants, each of VHCP EG, VHCP III and VHCP III Co may not exercise any portion of any pre-funded warrant, which, upon giving effect to such exercise, would cause: (i) the aggregate number of shares of common stock beneficially owned by it (together with its affiliates) to exceed 9.99% of the total number of shares of common stock outstanding immediately after giving effect to the exercise or (ii) the combined voting power of the Company's securities beneficially owned by it (together with its affiliates) to exceed 9.99% of the combined voting power of all of the Company's securities immediately outstanding after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrant. However, each of VHCP EG, VHCP III and VHCP III Co may increase or decrease such percentage to any other percentage not in excess of 19.99%, provided that any increase or decrease in such percentage shall not be effective until 61 days after such notice is delivered to the Company. In addition, pursuant to the terms of the common warrants, each

VHCP EG, VHCP III and VHCP III Co may not exercise any portion of any common warrant, which, upon giving effect to such exercise, would cause it (together with its affiliates) to own more than 9.99% of the number of shares of the common stock outstanding immediately after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the common warrants. However, each of VHCP EG, VHCP III and VHCP III Co may increase or decrease such percentage to any other percentage not in excess of 19.99%, provided that any increase in such percentage shall not be effective until 61 days after such notice is delivered to the Company. The information under "Common Stock Beneficially Owned Before this Offering" does not reflect the beneficial ownership limitations. "Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus" is comprised of: (i) 918,050 shares of common stock, 1,836,098 shares of common stock issuable upon the exercise of pre-funded warrants and 688,537 shares of common stock issuable upon the exercise of common warrants held by VHCP EG, (ii) 339,555 shares of common stock, 679,109 shares of common stock issuable upon the exercise of pre-funded warrants and 254,666 shares of common stock issuable upon the exercise of pre-funded warrants and 25,476 shares of common stock issuable upon the exercise of common warrants held by VHCP III Co. The address of the above referenced entities and persons is 7 Bryant Park, 23rd Floor, New York, New York 10018.

For entities affiliated with Redmile Group, LLC, "Common Stock Beneficially Owned Before this Offering" is comprised of an aggregate of 4,897,575 shares of common stock, which consists of 3,503,190 shares of common stock and 1,394,385 shares of common stock issuable upon the exercise of warrants held by private investment vehicles and/or separately managed accounts of which Redmile Group, LLC is the investment manager/adviser (collectively, the "Redmile Funds") and, in such capacity, exercises sole voting and investment power over all of the securities held by the Redmile Funds and may be deemed to be the beneficial owner of these securities. Jeremy C. Green serves as the managing member of Redmile Group, LLC and also may be deemed to be the beneficial owner of these securities. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of these securities, except to the extent of its or his pecuniary interest in such shares, if any. "Common Stock Beneficially Owned Before this Offering" excludes an aggregate of 22,822,598 shares of common stock issuable upon the exercise of the warrants described above, which are not exercisable within 60 days of October 31, 2022 by virtue of the beneficial ownership limitations described below. Pursuant to the terms of the pre-funded warrants, a holder may not exercise any portion of any pre-funded warrant, which, upon giving effect to such exercise, would cause: (i) the aggregate number of shares of common stock beneficially owned by such holder (together with its affiliates) to exceed 9.99% of the total number of shares of common stock outstanding immediately after giving effect to the exercise or (ii) the combined voting power of securities beneficially owned by such holder (together with its affiliates) to exceed 9.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of shares of common stock issued upon exercise of the pre-funded warrants. Upon notice to the company, the holder may increase or decrease the beneficial ownership limitation to any percentage not in excess of 19.99% and any increase or decrease in the beneficial ownership limitation will not be effective until 61 days after such notice is delivered by the holder to the Company. In addition, pursuant to the terms of the common warrants, a holder may not exercise any portion of any common warrant, which, upon giving effect to such exercise, would cause such holder (together with its affiliates) to own more than 9.99% of the number of shares of the common stock outstanding immediately after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the common warrants. However, the holder may increase or decrease such percentage to any other percentage not in excess of 19.99%, provided that any increase in such percentage shall not be effective until 61 days after such notice is delivered to the Company. Therefore, due to the beneficial ownership limitations, the number of shares of common stock into which the warrants are exercisable is limited to that number of shares

of common stock that would result in the applicable holder thereof, together with its affiliates, having an aggregate beneficial ownership of no more than 9.99% of the total issued and outstanding shares of common stock. "Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus" is comprised of: (i) 2,583,145 shares of common stock underlying the pre-funded warrants and 645,786 shares of common stock underlying the common stock warrants held by Redmile Biopharma Investments II, L.P. and (ii) 16,790,442 shares of common stock underlying the pre-funded warrants and 4,197,610 shares of common stock underlying the common stock underlying the common stock underlying the common stock warrants held by RedCo II Master Fund, L.P. Each of Redmile Biopharma Investments II, L.P. and RedCo II Master Fund, L.P. is a Redmile Fund. "Common Stock Beneficially Owned Upon Completion of this Offering" is comprised of an aggregate of 3,503,190 shares of Common Stock held by certain Redmile Funds. The address of the Redmile Funds is c/o Redmile Group, LLC One Letterman Drive, Building D, Suite D3-300, San Francisco, California 94129.

- (3) Consists of 3,592,975 shares of common stock and 645,786 shares of common stock issuable upon the exercise of common warrants held by Adage Capital Partners, L.P. Bob Atchinson and Phillip Gross are the managing members of Adage Capital Advisors, L.L.C., which is the managing member of Adage Capital Partners GP, L.L.C., which is the general partner of Adage Capital Partners, L.P., and each such person or entity, as the case may be, may be deemed the beneficial owner of the shares held by Adage Capital Partners, L.P. Pursuant to the terms of the common warrants, Adage Capital Partners, L.P. may not exercise any portion of any common warrant, which, upon giving effect to such exercise, would cause it (together with its affiliates) to own more than 9.99% of the number of shares of the common stock outstanding immediately after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the common warrants. However, Adage may increase or decrease such percentage to any other percentage not in excess of 19.99%, provided that any increase in such percentage shall not be effective until 61 days after such notice is delivered to the Company. The address of Adage Capital Partners, L.P. is 200 Clarendon Street, 52nd Floor, Boston, Massachusetts 02116.
- Consists of (i) 111,193 shares of common stock and 10,595 shares of common stock issuable upon the exercise of common warrants held by Fairmount Healthcare Fund LP and (ii) 3,247,370 shares of common stock and 312,298 shares of common stock issuable upon the exercise of common warrants held by Fairmount Healthcare Fund II LP. Fairmount Healthcare Fund GP LLC is the general partner of Fairmount Healthcare Fund LP and Fairmount Healthcare Fund II GP LLC is the general partner of Fairmount Healthcare Fund II LP. Fairmount Funds Management LLC, of which Tomas Kiselak and Peter Harwin are managing members, is the investment manager of Fairmount Healthcare Fund LP and Fairmount Healthcare Fund II LP. Fairmount Healthcare Fund GP LLC, Fairmount Healthcare Fund II GP LLC, Fairmount Funds Management LLC, Tomas Kiselak and Peter Harwin may be deemed to have voting and investment power over the shares of record held by Fairmount Healthcare Fund LP and Fairmount Healthcare Fund II LP. Fairmount Healthcare Fund GP LLC, Fairmount Healthcare Fund II GP LLC, Fairmount Funds Management LLC, Tomas Kiselak and Peter Harwin disclaim beneficial ownership of such shares, except to the extent of their pecuniary interest therein. Pursuant to the terms of the common warrants, each of Fairmount Healthcare Fund LP and Fairmount Healthcare Fund II LP may not exercise any portion of any common warrant, which, upon giving effect to such exercise, would cause it (together with its affiliates) to own more than 9.99% of the number of shares of the common stock outstanding immediately after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the common warrants. However, each of Fairmount Healthcare Fund LP and Fairmount Healthcare Fund II LP may increase or decrease such percentage to any other percentage not in excess of 19.99%, provided that any increase in such percentage shall not be effective until 61 days after such notice is delivered to the Company. "Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus" is comprised of: 42,382 shares of common stock and 10,595 shares of common stock issuable upon the exercise of common

warrants held by Fairmount Healthcare Fund LP and (ii) 1,249,190 shares of common stock and 312,298 shares of common stock issuable upon the exercise of common warrants held by Fairmount Healthcare Fund II LP. The address of the entities and persons listed above is 200 Barr Harbor Drive, Suite 400, West Conshohocken, Pennsylvania 19428.

- (5) Consists of 360,298 shares of common stock, 2,739,475 shares of common stock issuable upon the exercise of pre-funded warrants and 774,943 shares of common stock issuable upon the exercise of common warrants held by BCLS I Investco, LP ("BCLS I Investco"). Bain Capital Life Sciences Investors, LLC ("BCLSI") is the general partner of Bain Capital Life Sciences Partners, LP, which is the general partner of Bain Capital Life Sciences Fund, L.P. ("BCLS Fund I"), which is the manager of BCLS I Investco (GP), LLC, which is the general partner of BCLS I Investco. As a result, BCLSI may be deemed to share beneficial ownership with respect to the securities held by BCLS I Investco. The shares of common stock, including the shares of common stock issuable upon exercise of pre-funded warrants and common warrants, held by BCLS I Investco are required to be aggregated with 2,940,627 shares of common stock held by BCLS Fund I and 301,001 shares of common stock held by BCIP Life Sciences Associates, LP (together with BCLS I Investco and BCLS Fund I, the "Bain Capital Life Sciences Entities") for purposes of a beneficial ownership blocker that prohibits BCLS I Investco from exercising the pre-funded warrants or common warrants if, as a result of such exercise, the Bain Capital Life Sciences Entities would together beneficially own more than 9.99% of the total number of shares of common stock then issued and outstanding immediately after giving effect to the exercise. The address of BCLS I Investco is c/o Bain Capital Life Sciences, LP, 200 Clarendon Street, Boston, Massachusetts 02116.
- (6) Consists of 2,453,988 shares of common stock and 613,497 shares of common stock issuable upon the exercise of common warrants held by Alerce Medical Technology Partners, L.P. ("Alerce Medical"). Muneer A. Satter, a member of the Company's board of directors, has sole voting and dispositive power over the 3,067,485 shares of common stock beneficially owned by Alerce Medical, which number includes the 613,497 shares of common stock that may be acquired within 60 days of October 31, 2022, by exercising the common warrants Alerce Medical acquired from the Company. On July 18, 2022, Mr. Satter filed a Schedule 13D with the Securities and Exchange Commission regarding his beneficial ownership of common stock. As disclosed in that Schedule 13D, Mr. Satter beneficially owns an aggregate of 5,032,463 shares of common stock. Alerce Medical disclaims beneficial ownership of all other shares of common stock beneficially owned by Mr. Satter. Pursuant to the terms of the common warrants, Alerce Medical may not exercise any portion of any common warrant, which, upon giving effect to such exercise, would cause it (together with its affiliates) to own more than 19.99% of the number of shares of the common stock outstanding immediately after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the common warrants. However, Alerce Medical may decrease such percentage to any other percentage (or subsequently increase to any other percentage not in excess of 19.99%, provided that any increase in such percentage shall not be effective until 61 days after such notice is delivered to the Company). The address of Alerce Medical is c/o Satter Management Co., L.P., 676 N. Michigan Avenue, Suite 4000, Chicago, Illinois 60611
- (7) Consists of (i) 785,276 shares of common stock and 196,319 shares of common stock issuable upon the exercise of common warrants held by Driehaus Life Sciences Master Fund, L.P. and (ii) 247,982 shares of common stock and 61,995 shares of common stock issuable upon the exercise of common warrants held by Driehaus Life Sciences (QP) Fund, L.P. Driehaus Life Sciences Master Fund, L.P. is a Cayman Islands exempted limited partnership and Driehaus Life Sciences (QP) Fund, L.P. is a Delaware limited partnership (collectively, the "Funds"). Driehaus Capital Management LLC has been appointed as the investment manager of the Funds by the managing member of each Fund. Michael Caldwell and Alex Munns are portfolio managers of

Driehaus Capital Management LLC who act as the portfolio managers for the Funds and who exercise sole voting and dispositive power over the securities of the company. Pursuant to the terms of the common warrants, each of the Funds may not exercise any portion of any common warrant, which, upon giving effect to such exercise, would cause the Fund (together with its affiliates) to own more than 4.99% of the number of shares of the common stock outstanding immediately after giving effect to such exercise, as such percentage ownership is determined in accordance with the terms of the common warrants. However, the Fund may increase or decrease such percentage to any other percentage not in excess of 19.99%, provided that any increase in such percentage shall not be effective until 61 days after such notice is delivered to the Company. The address of the entities and persons listed above is 25 E. Erie Street, Chicago, Illinois 60611.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued, or issuable upon exercise of the warrants, to the selling securityholders to permit the resale of such shares of common stock by the holder of such shares of common stock from time to time after the date of this prospectus. The selling securityholders may from time to time offer some or all of the shares of common stock covered by this prospectus. To the extent required, this prospectus may be amended and supplemented from time to time to describe a specific plan of distribution. The selling securityholders will not pay any of the costs, expenses and fees in connection with the registration of the shares covered by this prospectus, but they will pay any and all underwriting discounts, selling commissions and similar charges attributable to sales of the shares. We will not receive any proceeds from the sale of the shares of our common stock covered hereby. The selling securityholders may sell some or all of the shares of common stock covered by this prospectus from time to time or may decide not to sell any of the shares of common stock covered by this prospectus. As used in this prospectus, "selling securityholders" includes donees, pledgees, transferees, assignees or other successors in interest selling securities received from a selling securityholder as a gift, pledge, partnership distribution, assignment or other transfer. The selling securityholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then-current market price or in negotiated transactions. The selling securityholders may dispose of their shares by one or more of, or a combination of, the following methods:

- distributions to members, partners, stockholders or other equityholders of the selling securityholders;
- purchases by a broker-dealer as principal and resale by such broker-dealer for its own account pursuant to this prospectus;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- block trades in which the broker-dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- an over-the-counter distribution in accordance with the rules of Nasdaq;
- through trading plans entered into by a selling securityholder pursuant to Rule 10b5-1 under the Exchange Act, that are in place at the time of an offering pursuant to this prospectus and any applicable prospectus supplement hereto that provide for periodic sales of their securities on the basis of parameters described in such trading plans;
- to or through underwriters or broker-dealers:
- in "at the market" offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- in privately negotiated transactions:
- in options transactions;
- through a combination of any of the above methods of sale; or
- any other method permitted pursuant to applicable law.

In addition, any shares that qualify for sale pursuant to Rule 144 under the Securities Act ("Rule 144") may be sold under Rule 144 rather than pursuant to this prospectus. A selling securityholder that is an entity may elect to make an in-kind distribution of common stock to its members, partners, stockholders or other equityholders pursuant to the registration statement of which this prospectus forms a part by delivering a prospectus. To the extent that such members, partners, stockholders or other

equityholders are not affiliates of ours, such members, partners, stockholders or other equityholders would thereby receive freely tradable shares of common stock pursuant to a distribution pursuant to the registration statement of which this prospectus forms a part.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution. In connection with distributions of the shares or otherwise, the selling securityholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of shares of common stock in the course of hedging the positions they assume with selling securityholders. The selling securityholders may also sell shares of common stock short and redeliver the shares to close out such short positions. The selling securityholders may also enter into option or other transactions with broker-dealers or other financial institutions that require the delivery to such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). The selling securityholders may also pledge shares to a broker-dealer or other financial institution, and, upon a default, such broker-dealer or other financial institution, may effect sales of the pledged shares pursuant to this prospectus (as supplemented or amended to reflect such transaction).

A selling securityholder may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by any selling securityholder or borrowed from any selling securityholder or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from any selling securityholder in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement (or a post-effective amendment). In addition, any selling securityholder may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

In effecting sales, broker-dealers or agents engaged by the selling securityholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling securityholders in amounts to be negotiated immediately prior to the sale.

In offering the shares covered by this prospectus, the selling securityholders and any broker-dealers who execute sales for the selling securityholders may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. Any profits realized by the selling securityholders and the compensation of any broker-dealer may be deemed to be underwriting discounts and commissions.

In order to comply with the securities laws of certain states, if applicable, the shares must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the selling securityholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling securityholders and their affiliates. In addition, we will make copies of this prospectus available to the

selling securityholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. We have agreed to indemnify the selling securityholders against certain liabilities, including liabilities under the Securities Act, relating to the registration of the shares offered by this prospectus. The selling securityholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities under the Securities Act.

At the time a particular offer of shares is made, if required, a prospectus supplement will be distributed that will set forth the number of shares being offered and the terms of the offering, including the name of any underwriter, dealer or agent, the purchase price paid by any underwriter, any discount, commission and other item constituting compensation, any discount, commission or concession allowed or reallowed or paid to any dealer, and the proposed selling price to the public.

LEGAL MATTERS

The validity of the common stock being offered by this prospectus will be passed upon for us by Latham & Watkins LLP, Menlo Park, California.

EXPERTS

The consolidated financial statements of Annexon, Inc. as of December 31, 2021 and 2020, and for each of the years in the two-year period ended December 31, 2021, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2021 have been incorporated by reference herein in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit report covering the December 31, 2021 financial statements refers to a change to the accounting for leases.