

Prospectus

**Leap Therapeutics, Inc.**
14,184,397 Shares
Common Stock

This prospectus relates to the possible resale or other disposition from time to time by the selling stockholders named in this prospectus of up to an aggregate of 14,184,397 shares of our common stock, par value \$0.001 per share, which consist of (i) 12,660,993 shares of our common stock that are outstanding and were issued on April 15, 2024 to certain of the selling stockholders named in this prospectus in connection with a private placement (the "Private Placement") pursuant to a securities purchase agreement, dated as of April 10, 2024 (the "Securities Purchase Agreement"), and (ii) 1,523,404 shares of our common stock issuable upon exercise of pre-funded warrants (the "Pre-Funded Warrants") that are outstanding and were issued by us on April 15, 2024 to certain of the selling stockholders named in this prospectus in connection with the Private Placement pursuant to the Securities Purchase Agreement.

We agreed to file the registration statement of which this prospectus is a part pursuant to the Securities Purchase Agreement. Additional information with respect to the Securities Purchase Agreement is contained in this prospectus under the heading "Selling Stockholders" and in our Current Report on Form 8-K filed with the Securities and Exchange Commission on April 11, 2024.

The selling stockholders or their permitted transferees or other successors-in-interest may, but are not required to, sell, transfer, or otherwise dispose of, any or all of the shares of our common stock offered by this prospectus at any time and from time to time in a number of different ways, including sales on any stock exchange or in negotiated transactions, and at varying prices, including fixed prices, at prevailing market prices at the time of sale or disposition, at prices related to the prevailing market price, or at negotiated prices. See "Plan of Distribution" on page [11](#) for a description of how the selling stockholders may dispose of the shares covered by this prospectus.

We are not selling any shares of our common stock under this prospectus and will not receive any of the proceeds from the sale of shares of our common stock by the selling stockholders. However, we will receive proceeds from any cash exercise of any of the Pre-Funded Warrants. If all of the Pre-Funded Warrants were cash exercised at their respective current applicable exercise prices, the gross proceeds to us from such cash exercises would be approximately \$1,523.

We have agreed to pay certain expenses related to the registration of the offer and sale by the selling stockholders of our common stock pursuant to the registration statement of which this prospectus forms a part. The selling stockholders will bear all commissions, discounts, concessions and other selling expenses, if any, in connection with the sale of the shares of our common stock covered by this prospectus.

Our common stock is listed on the Nasdaq Capital Market under the symbol "LPTX." On May 7, 2024, the closing price of our common stock was \$3.07 per share.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

Investing in our common stock involves a high degree of risk. You should carefully read the information contained under the heading "Risk Factors" on page [4](#) of this prospectus, and under similar headings in the documents that are incorporated by reference into 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 May 23, 2024.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the U.S. Securities and Exchange Commission (the “SEC”), using a “shelf” registration process. By using this registration process, the selling stockholders named in this prospectus may offer and sell shares of our common stock from time to time in one or more transactions as described under “Plan of Distribution”.

This prospectus provides you with a general description of us and our securities. We may add, update or change in a prospectus supplement any of the information contained in this prospectus or the documents incorporated by reference. For further information about our business and our securities, you should refer to the registration statement and the reports incorporated by reference in this prospectus, as described in “Where You Can Find More Information” and “Incorporation of Certain Information by Reference”. This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find More Information.”

You must not rely upon any information or representation not contained or incorporated by reference in this prospectus. You should rely only on the information contained in this prospectus and in any prospectus supplement (including in any documents incorporated by reference herein or therein). You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or securities are sold on a later date. We and the selling stockholders named in this prospectus have not authorized anyone to provide you with any different information.

Leap Therapeutics, Inc. and its subsidiaries are collectively referred to herein as “Leap”, “the Company”, “we”, “us”, and “our”, unless otherwise specified or the context indicates otherwise.

PROSPECTUS SUMMARY

This summary highlights selected information appearing elsewhere or incorporated by reference into this prospectus and may not contain all of the information that you need to consider in making your investment decision. You should carefully read this prospectus, any applicable prospectus supplement, any related free writing prospectus that we have authorized for use in connection with this offering, and any documents incorporated by reference, including the information contained under the heading “Risk Factors” beginning on page 4 in this prospectus and under similar headings in our recent [Annual Report on Form 10-K for the fiscal year ended December 31, 2023](#), before making an investment decision.

Our Company

We are a biopharmaceutical company developing novel biomarker-targeted antibody therapies designed to treat patients with cancer by inhibiting fundamental tumor-promoting pathways, targeting cancer-specific cell surface molecules, and harnessing the immune system to attack cancer cells. Our lead clinical stage program is DKN-01, a monoclonal antibody that inhibits Dickkopf-related protein 1 (“DKK1”). We are currently studying DKN-01 in multiple ongoing clinical trials in patients with esophagogastric cancer, gynecologic cancers, or colorectal cancer. Our second clinical stage program is FL-301, a monoclonal antibody that targets cells that express Claudin18.2 on their cell surface. We also have two preclinical antibody programs, FL-302 and FL-501.

We were incorporated in the state of Delaware as Dekkun Corporation on January 3, 2011 and changed our name to HealthCare Pharmaceuticals, Inc. effective May 29, 2014, and then to Leap Therapeutics, Inc. effective November 16, 2015. During 2015, HealthCare Pharmaceuticals Pty Ltd. (“HCP Australia”) was formed and is a wholly owned subsidiary of the Company. During January 2017, the Company merged with Macrocare Ltd. (now “Leap Therapeutics Ltd.”) and its wholly-owned subsidiary Macrocare, Inc.

Our principal executive offices are located at 47 Thorndike Street, Suite B1-1, Cambridge, Massachusetts 02141, and our telephone number is (617) 714-0360. Our website address is www.leaptx.com. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock.

THE OFFERING

Shares of Common Stock offered for resale by the Selling Stockholders:

Up to an aggregate of 14,184,397 shares of our common stock, par value \$0.001 per share, which consist of (i) 12,660,993 shares of our common stock that are outstanding and were issued on April 15, 2024 to certain of the selling stockholders named in this prospectus in connection with a private placement (the “Private Placement”) pursuant to a securities purchase agreement, dated as of April 10, 2024 (the “Securities Purchase Agreement”), and (ii) 1,523,404 shares of our common stock issuable upon exercise of pre-funded warrants (the “Pre-Funded Warrants”) that are outstanding and were issued by us on April 15, 2024 to certain of the selling stockholders named in this prospectus in connection with the Private Placement pursuant to the Securities Purchase Agreement.

Use of Proceeds:

We will not receive any of the proceeds from the sale of any of the shares of our common stock that may be offered from time to time by the selling stockholders. However, we will receive proceeds from any cash exercise of any of the Pre-Funded Warrants. If all of the Pre-Funded Warrants were cash exercised at their respective current applicable exercise prices, the gross proceeds to us from such cash exercises would be approximately \$1,523. We intend to use the net proceeds, if any, from the cash exercise of any of the Pre-Funded Warrants for general corporate purposes.

Risk Factors:

Investing in our common stock involves risks. Please refer to the information contained under the heading “Risk Factors” beginning on page [4](#) of this prospectus for a discussion of factors you should carefully consider before investing in our securities.

Nasdaq Capital Market Symbol:

LPTX

RISK FACTORS

An investment in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described below and under “Risk Factors” contained in our most recent Annual Report on Form 10-K, and in our updates to those Risk Factors in our Quarterly Reports on Form 10-Q or Current Reports on Form 8-K following the most recent Annual Report on Form 10-K, and in all other information appearing in this prospectus or incorporated by reference into this prospectus and any applicable prospectus supplement. The material risks and uncertainties that management believes affect us will be described in those documents. In addition to those risk factors, there may be additional risks and uncertainties of which management is not aware or focused on or that management deems immaterial. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment. This prospectus is qualified in its entirety by these risk factors.

Future sales of our common stock by the selling stockholders and future issuances of equity securities by us could cause our stock price to decline.

Sales of a substantial number of shares of our common stock by the selling stockholders in the public market, or the perception by the market that those sales could occur, could cause the market price of our common stock to decline or could make it more difficult for us to raise funds through the sale of equity in the future.

Future issuances of our common stock or our other equity securities could further depress the market for our common stock. We expect to continue incurring costs associated with research and development with respect to our programs and general and administrative costs associated with our operations, and to satisfy our funding requirements, and we may need to sell additional equity securities. The sale or the proposed sale of substantial amounts of our common stock or our other equity securities may adversely affect the market price of our common stock and our stock price may decline substantially. Our stockholders may experience substantial dilution and a reduction in the price that they are able to obtain upon sale of their shares of common stock. New equity securities issued may have greater rights, preferences or privileges than our existing common stock.

The number of shares of our common stock being registered for resale is significant in relation to the number of our outstanding shares of common stock.

We have filed a registration statement of which this prospectus is a part to register the shares of our common stock offered hereunder for sale into the public market by the selling stockholders. These shares of common stock represent a large number of shares of our common stock, and if sold in the market all at once or at about the same time, could depress the market price of our common stock during the period the registration statement remains effective and could also affect our ability to raise equity capital.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and each prospectus supplement, including the documents that we incorporate by reference, contains or may contain forward-looking statements as that term is defined in the federal securities laws. The events described in forward-looking statements contained in this prospectus, including the documents that we incorporate by reference, may not occur. Generally, these statements relate to our business plans or strategies, projected or anticipated benefits or other consequences of our plans or strategies, financing plans, projected or anticipated benefits from acquisitions that we may make, or projections involving anticipated revenues, earnings or other aspects of our operating results or financial position, and the outcome of any contingencies. Any such forward-looking statements are based on current expectations, estimates and projections of management. We intend for these forward-looking statements to be covered by the safe-harbor provisions for forward-looking statements. Words such as “anticipate,” “expect,” “project,” “intend,” “believe,” “may,” “will,” “should,” “plan,” “could,” “continue,” “target,” “contemplate,” “estimate,” “forecast,” “guidance,” “predict,” “possible,” “potential,” “pursue,” “likely,” and their opposites and similar expressions are intended to identify forward-looking statements. All statements, other than historical facts, including statements regarding estimations of projected cash runway; our future product development plans; the potential, safety, efficacy, and regulatory and clinical progress of our product candidates, including the anticipated timing for initiation of clinical trials and release of clinical trial data and the expectations surrounding potential regulatory submissions, approvals and timing thereof; and any assumptions underlying any of the foregoing, are forward-looking statements.

Forward looking statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward looking statements. We believe that these factors include, but are not limited to, the factors that we identify in any of the documents incorporated or deemed incorporated into this prospectus and the registration statement by reference, including in our most recent [Annual Report on Form 10-K for the year ended December 31, 2023](#), and in any of our subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K.

You should also consider carefully the information set forth in the section titled “Risk Factors” or elsewhere in this prospectus and the documents incorporated or deemed incorporated herein by reference, including in our most recent Annual Report on Form 10-K and in our updates to those risk factors in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and other factors described elsewhere in this prospectus. Any one or more of these uncertainties, risks, factors and other influences could materially affect our results of operations and whether forward-looking statements made by us ultimately prove to be accurate. Our actual results, performance and achievements could differ materially from those expressed or implied in these forward-looking statements. Except as otherwise required by law, we undertake no obligation to publicly update or revise any forward-looking statements, whether from new information, future events or otherwise.

USE OF PROCEEDS

We will not receive any proceeds from the sale of our common stock by the selling stockholders. However, we will receive proceeds from any cash exercise of any of the Pre-Funded Warrants. If all of the Pre-Funded Warrants were cash exercised at their respective current applicable exercise prices, the gross proceeds to us from such cash exercises would be approximately \$1,523. We intend to use the net proceeds, if any, from the cash exercise of the Pre-Funded Warrants for general corporate purposes. The Pre-Funded Warrants may also be exercised on a cashless basis. If the Pre-Funded Warrants are exercised on a cashless basis, we would not receive any proceeds from the exercise of the Pre-Funded Warrants.

SELLING STOCKHOLDERS

The term “selling stockholders” includes the stockholders listed below and their transferees, pledges, donees or other successors-in-interest who may acquire shares from a selling stockholder as a gift, pledge, partnership distribution or other non-sale related transfer after the date of this prospectus. Information concerning the selling stockholders may change after the date of this prospectus and changed information will be presented in a supplement to this prospectus if and when required.

This prospectus covers the offering for resale from time to time, in one or more offerings, of up to an aggregate of 14,184,397 shares of our common stock, par value \$0.001 per share, which consist of (i) 12,660,993 shares of our common stock that are outstanding and were issued on April 15, 2024 to certain of the selling stockholders named in this prospectus in connection with a private placement (the “Private Placement”) pursuant to a securities purchase agreement, dated as of April 10, 2024 (the “Securities Purchase Agreement”), and (ii) 1,523,404 shares of our common stock issuable upon exercise of pre-funded warrants (the “Pre-Funded Warrants”) that are outstanding and were issued by us on April 15, 2024 to certain of the selling stockholders named in this prospectus in connection with the Private Placement pursuant to the Securities Purchase Agreement.

Pursuant to the Securities Purchase Agreement, we agreed to file the registration statement of which this prospectus is a part to cover the resale of the shares of our common stock issued to the selling stockholders in connection with the Private Placement and the shares of our common stock issuable to the selling stockholders upon exercise of the Pre-Funded Warrants, and to keep such registration statement effective with respect to each selling stockholder until the earliest to occur of: (i) the date on which the shares of our common stock registered for resale under the registration statement of which this prospectus is a part have been sold or otherwise transferred by the selling stockholders pursuant to and in a manner contemplated by such registration statement, (ii) such shares of our common stock are sold pursuant to Rule 144 under circumstances in which any legend borne by such shares relating to restrictions on transferability thereof, under the Securities Act or otherwise, is removed by the Company, (iii) such shares of our common stock become eligible to be sold pursuant to Rule 144 without condition or restriction, including, without any limitation, as to volume of sales, and without such selling stockholder complying with any method of sale requirements or notice requirements under Rule 144, (iv) such shares of our common stock (and, in the event that any of such shares of our common stock consist of shares issuable upon exercise of outstanding Pre-Funded Warrants, such Pre-Funded Warrants) shall cease to be outstanding following their issuance, or (v) April 15, 2027. The registration statement of which this prospectus is a part is being filed pursuant to the Securities Purchase Agreement.

The table below sets forth (i) the name of each selling stockholder, (ii) the number of shares of our common stock beneficially owned by each selling stockholder as of May 7, 2024, (iii) the number of shares of our common stock offered by each selling stockholder hereunder, (iv) the number of shares of our common stock beneficially owned by each selling stockholder following the completion of this offering (assuming each selling stockholder sells all of the shares of our common stock that are being offered by such selling stockholder pursuant to this prospectus), and (v) the percentage of our common stock beneficially owned by each selling stockholder following the completion of this offering (assuming each selling stockholder sells all of the shares of our common stock that are being offered by such selling stockholder pursuant to this prospectus), based on 38,264,464 shares of our common stock outstanding as of May 7, 2024. Except as and to the extent otherwise noted below, beneficial ownership is determined under the SEC rules and regulations and generally includes voting or investment power over securities. Information with respect to beneficial ownership is based upon information obtained from the selling stockholders as of May 7, 2024.

The selling stockholders are not making any representation that any shares of our common stock covered by this prospectus will be offered for sale or sold. Because each selling stockholder may dispose of all, none or some portion of the shares of our common stock covered by this prospectus, no estimate can be given as to the number of shares that will be beneficially owned by a selling stockholder upon termination of this offering. In addition, the selling stockholders may have sold, transferred or otherwise disposed of their shares of our common stock in transactions exempt from the registration requirements of the Securities Act after the date on which the information in the table is presented. For purposes of the table below, however, we have assumed that after termination of this offering, none of the shares of our common stock registered for resale under this prospectus will be beneficially owned by the selling stockholders, and we have further assumed that the selling stockholders will not acquire beneficial ownership of any additional shares of our common stock during this offering.

To our knowledge, except as indicated in the footnotes to the table below, each selling stockholder named in the table has sole voting and investment power with respect to all shares of our common stock shown in the table to be beneficially owned by such selling stockholder. Except as described in the footnotes to the table below, none of the selling stockholders has had any position, office or other material relationship with us or any of our predecessors or affiliates within the past three years. In addition, based on information provided to us, none of the selling stockholders that are affiliates of broker-dealers, if any, purchased the shares of our common stock or the Pre-Funded Warrants outside the ordinary course of business or, at the time of their acquisition of such shares of our common stock or the Pre-Funded Warrants, had any agreements, understandings or arrangements with any other persons, directly or indirectly, to dispose of such shares of our common stock or the Pre-Funded Warrants. Information concerning the selling stockholders may change from time to time, and any changed information will be set forth in supplements to this prospectus to the extent required.

Name and Address of Selling Stockholder ⁽²⁾	Shares of Common Stock Beneficially Owned Prior to the Offering		Maximum Number of Shares to be Sold Pursuant to this Prospectus ⁽¹⁾	Shares of Common Stock Beneficially Owned After the Offering	
	Number	Percent (%)		Number	Percent (%)
Entities Affiliated with Rock Springs Capital Management LP⁽³⁾ 650 S. Exeter St., Suite 1070 Baltimore, MD 21202	1,266,546	3.31%	354,609	911,937	2.38%
Dellora Investments Master Fund LP⁽⁴⁾ 283 Greenwich Ave., 3rd Floor Greenwich, CT 06830	212,765	0.56%	212,765	—	*
Laurion Capital Master Fund LTD.⁽⁵⁾ c/o Laurion Capital Management LP 360 Madison Ave., Suite 1900 New York, NY 10017	709,219	1.85%	709,219	—	*
Lincoln Park Capital Fund, LLC⁽⁶⁾ 415 N. LaSalle St., Suite 700B Chicago, IL 60654	173,374	0.45%	128,374	45,000	*
683 Capital Partners, LP⁽⁷⁾ 1700 Broadway, Suite 4200 New York, NY 10019	1,486,456	3.88%	1,063,829	422,627	1.10%
Entities Affiliated with Baker Bros. Advisors LP⁽⁸⁾ 860 Washington Street, 3rd Floor New York, NY 10014	1,948,116	4.99%	1,523,404	1,948,116	4.99%
Gilead Sciences, Inc.⁽⁹⁾ 333 Lakeside Dr. Foster City, CA 94404-1147	5,319,148	13.90%	5,319,148	—	*

Name and Address of Selling Stockholder ⁽²⁾	Shares of Common Stock Beneficially Owned Prior to the Offering		Maximum Number of Shares to be Sold Pursuant to this Prospectus ⁽¹⁾	Shares of Common Stock Beneficially Owned After the Offering	
	Number	Percent (%)		Number	Number
Atlas Diversified Master Fund, Ltd. ⁽¹⁰⁾ 444 W. Lake St., 50th Floor Chicago, IL 60606	3,753,038	9.81%	3,100,000	653,038	1.71%
Samsara BioCapital, LP ⁽¹¹⁾ 628 Middlefield Road Palo Alto, CA 94301	2,442,352	6.38%	1,773,049	669,303	4.63%

* Indicates beneficial ownership of less than 1%.

- (1) The number of shares of our common stock in the column “Maximum Number of Shares to be Sold Pursuant to this Prospectus” represents all of the shares of our common stock that a selling stockholder may offer and sell from time to time under this prospectus without giving effect to the Beneficial Ownership Limitation (as defined below).
- (2) This table and the information in the footnotes below are based upon information supplied to us by the selling stockholders.
- (3) Consists of (a) 165,415 shares of our common stock held by Four Pines Master Fund LP (“Four Pines Fund”), including 49,578 shares of our common stock purchased by Four Pines Fund in the Private Placement, and (b) 1,101,131 shares of our common stock held by Rock Springs Capital Master Fund LP (“Rock Springs Fund”), including 305,031 shares of our common stock purchased by Rock Springs Fund in the Private Placement. Rock Springs Capital Management LP (“RSCM”) is the investment adviser of Rock Springs Fund and Four Pines Fund. The general partner of RSCM is Rock Springs Capital LLC (“RSC”). RSC and RSCM may therefore be deemed to have or share beneficial ownership of the shares of our common stock held by Rock Springs Fund and Four Pines Fund.
- (4) Consists of 212,765 shares of our common stock purchased by Dellora Investments Master Fund LP (“Dellora Fund”) in the Private Placement. Dellora Investments LP, which serves as the investment manager to Dellora Fund, may be deemed to be the beneficial owner of all shares of our common stock held by the Dellora Fund. Kevin Pyun, as Principal of Dellora Investments LP, with the power to exercise investment and voting discretion, may be deemed to be the beneficial owner of all shares of our common stock held by Dellora Fund. Dellora Investments LP and Kevin Pyun expressly disclaim beneficial ownership over any of the shares of our common stock held by Dellora Fund.
- (5) Consists of 709,219 shares of our common stock purchased by Laurion Capital Master Fund LTD. (“Laurion Fund”) in the Private Placement. Laurion Capital Management LP (“Laurion LP”), the investment manager of Laurion Fund, has voting and investment power over the shares of our common stock held by Laurion Fund. Benjamin A. Smith and Sheehan Maduraperuma are the managing members of Laurion Capital GP LLC, which is the general partner of Laurion LP, and each of Benjamin A. Smith and Sheehan Maduraperuma have shared voting and dispositive power over the shares of our common stock held by Laurion Fund. Each of Laurion Fund, Laurion Capital GP LLC, Benjamin A. Smith and Sheehan Maduraperuma disclaims beneficial ownership over these securities.
- (6) Consists of (a) 128,374 shares of our common stock purchased by Lincoln Park Capital Fund, LLC (“Lincoln Park Capital Fund”) in the Private Placement and (b) 45,000 shares of our common stock issuable upon the exercise of warrants held by Lincoln Park Capital Fund. Joshua Scheinfeld and Jonathan Cope, the principals of Lincoln Park Capital Fund, have shared voting and dispositive power with respect to the securities held by Lincoln Park Capital Fund, and are deemed to be beneficial owners of all of the shares of our common stock held by Lincoln Park Capital Fund.
- (7) Consists of (a) 1,415,600 shares of our common stock held by 683 Capital Partners, LP (“683 LP”), including 1,063,829 shares of our common stock purchased by 683 LP in the Private Placement, and (b) 70,856 shares of our common stock issuable upon the exercise of warrants held by 683 LP. 683 Capital GP, LLC is the general partner of 683 LP, and Ari Zweiman, as managing member of 683 Capital GP, LLC, may be deemed to beneficially own the shares of our common stock held by 683 LP. Ari Zweiman

disclaims beneficial ownership of such shares, except to the extent of pecuniary interest therein (if any). 683 Capital Management, LLC is the investment manager of 683 LP, and Ari Zweiman is the managing member of 683 Capital Management, LLC. As a result, each of 683 Capital Management, LLC and Mr. Zweiman may also be deemed to beneficially own the shares of our common stock held by 683 LP. Each of 683 Capital Management, LLC and Mr. Zweiman disclaims beneficial ownership of such shares, except to the extent of its or his pecuniary interest therein (if any).

- (8) Consists of (a) (i) 1,071,164 shares of our common stock held by Baker Brothers Life Sciences, L.P. (“Life Sciences”), none of which were purchased by Life Sciences in the Private Placement, (ii) 981,171 shares of our common stock issuable upon the exercise of pre-funded warrants held by Life Sciences, which were issued by us to Life Sciences on March 5, 2020 and September 24, 2021 (the “Life Sciences 2020/2021 Pre-Funded Warrants”), (iii) 1,320,906 shares of our common stock issuable upon the exercise of warrants held by Life Sciences, which were issued by us to Life Sciences on March 5, 2020 (the “Life Sciences Warrants”), and which Life Sciences Warrants may be exercised for shares of our common stock or additional pre-funded warrants to purchase shares of our common stock, and (iv) 1,393,982 shares of our common stock issuable upon the exercise of the Pre-Funded Warrants purchased by Life Sciences in the Private Placement, and (b) (i) 101,011 shares of our common stock held by 667, L.P. (“667” and, together with Life Sciences, the “Baker Funds”), none of which were purchased by 667 in the Private Placement, (ii) 84,273 shares of our common stock issuable upon the exercise of pre-funded warrants held by 667, which were issued by us to 667 on March 5, 2020 and September 24, 2021 (the “667 2020/2021 Pre-Funded Warrants”), (iii) 120,485 shares of our common stock issuable upon the exercise of warrants held by 667, which were issued by us to 667 on March 5, 2020 (the “667 Warrants”), and which 667 Warrants may be exercised for shares of our common stock or additional pre-funded warrants to purchase shares of our common stock, and (iv) 129,422 shares of our common stock issuable upon the exercise of the Pre-Funded Warrants purchased by 667 in the Private Placement. The Life Sciences 2020/2021 Pre-Funded Warrants, the 667 2020/2021 Pre-Funded Warrants, the Pre-Funded Warrants purchased by the Baker Funds in the Private Placement, and any pre-funded warrants issuable upon the exercise of the Life Sciences Warrants and the 667 Warrants are collectively referred to herein as the “Baker Pre-Funded Warrants”. The information set forth in the table above and in the foregoing provisions of this footnote with respect to the beneficial ownership of the shares of our common stock held by the Baker Funds is presented (A) as if the Life Sciences Warrants and the 667 Warrants were exercisable only for pre-funded warrants to purchase shares of our common stock and (B) after giving effect to the Beneficial Ownership Limitation (as defined below) set forth in the Baker Pre-Funded Warrants. Each of the Baker Pre-Funded Warrants contains a provision to the effect that the holder thereof is prohibited from exercising such Baker Pre-Funded Warrant to the extent that, immediately prior to or as a result of such exercise, the applicable holder thereof would, together with affiliates and any persons who are members of a Section 13(d) group with such applicable holder or its affiliates, beneficially own more than 4.99% of the total number of shares of our common stock then issued and outstanding immediately after giving effect to the exercise thereof (the “Beneficial Ownership Limitation”). By written notice to us, the applicable holder of any Baker Pre-Funded Warrant may from time to time increase or decrease the Beneficial Ownership Limitation applicable to such Baker Pre-Funded Warrant to any other percentage not in excess of 19.99%. Any such increase will not be effective until the 61st day after such notice is delivered to us. If none of the Baker Pre-Funded Warrants were subject to a Beneficial Ownership Limitation provision, (x) the “Shares of Common Stock Beneficially Owned Prior to Offering” of the Baker Funds would include an additional 3,254,298 shares of our common stock issuable upon the exercise of the Baker Pre-Funded Warrants, and, therefore, would be equal to an aggregate of 5,202,414 shares of our common stock, representing approximately 12.30% of the aggregate number of the shares of our common stock deemed to be beneficially owned by our stockholders prior to this offering, and (y) the “Shares of Common Stock Beneficially Owned After the Offering” of the Baker Funds would include an additional 1,730,894 shares of our common stock issuable upon the exercise of the Baker Pre-Funded Warrants, and, therefore, would be equal to an aggregate of 3,679,010 shares of our common stock, representing approximately 9.02% of the aggregate number of shares of our common stock deemed to be beneficially owned by our stockholders after this offering. Baker Bros. Advisors LP (the “Advisor”) is the investment advisor to the Baker Funds and has the voting and investment power with respect to the securities held by the Baker Funds and thus may be deemed to beneficially own such securities. Baker Bros. Advisors (GP) LLC (the “Advisor GP”) is the sole general partner of the Advisor and thus may be

deemed to beneficially own the securities held by the Baker Funds. The managing members of the Advisor GP are Julian C. Baker and Felix J. Baker, who may be deemed to beneficially own the securities held by the Baker Funds. Julian C. Baker, Felix J. Baker, the Advisor and the Advisor GP disclaim beneficial ownership of all shares of our common stock held by the Baker Funds, except to the extent of their indirect pecuniary interest therein.

- (9) Consists of 5,319,148 shares of our common stock purchased by Gilead Sciences, Inc. in the Private Placement.
- (10) Consists of 3,753,038 shares of our common stock held by Atlas Diversified Master Fund, Ltd. (“ADMF”), including 3,100,000 shares of our common stock purchased by ADMF in the Private Placement. Balyasny Asset Management L.P. (“BAM”) is the investment adviser of ADMF. Dmitry Balyasny indirectly controls the general partner of BAM and as a result may be deemed to exercise voting and investment power over the shares of our common stock held by ADMF and thus may be deemed to beneficially own such shares.
- (11) Consists of 2,442,352 shares of our common stock held by Samsara BioCapital, L.P. (“Samsara LP”), including 1,773,049 shares of our common stock purchased by Samsara LP in the Private Placement. Samsara BioCapital GP, LLC (“Samsara LLC”) is the general partner of Samsara LP and may be deemed to beneficially own the shares of our common stock held by Samsara LP. Dr. Srinivas Akkaraju has voting and investment power over the shares held by Samsara LP and, accordingly, may be deemed to beneficially own the shares of our common stock held by Samsara LP. Each of Samsara LLC and Dr. Akkaraju disclaims beneficial ownership in these shares except to the extent of his or its respective pecuniary interest therein. Christian Richard is the Head of Public Research at Samsara BioCapital and has served on our Board of Directors since January 2023.

PLAN OF DISTRIBUTION

Each selling stockholder named herein may, from time to time, sell any or all of their securities covered hereby on any stock exchange, market or trading facility on which the securities are traded, in private transactions or otherwise. These sales may be at fixed or negotiated prices or at market prices prevailing at the time of sale. A selling stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the selling stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of the securities or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders may pledge or grant a security interest in some or all of the shares of our common stock owned by them and, if any of them defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell the shares of our common stock from time to time pursuant to this prospectus or any supplement or amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of our common stock in other circumstances in which case the transferees, donees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In

such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. We are not aware that any selling stockholder has any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Pursuant to the Securities Purchase Agreement, we have agreed to keep this prospectus effective until the earliest to occur of: (i) the date on which the shares of our common stock registered for resale under the registration statement of which this prospectus is a part have been sold or otherwise transferred by the selling stockholders pursuant to and in a manner contemplated by such registration statement, (ii) such shares of our common stock are sold pursuant to Rule 144 under circumstances in which any legend borne by such shares relating to restrictions on transferability thereof, under the Securities Act or otherwise, is removed by the Company, (iii) such shares of our common stock become eligible to be sold pursuant to Rule 144 without condition or restriction, including, without any limitation, as to volume of sales, and without such selling stockholder complying with any method of sale requirements or notice requirements under Rule 144, such shares of our common stock (and, in the event that any of such shares of our common stock consist of shares issuable upon exercise of outstanding Pre-Funded Warrants, such Pre-Funded Warrants) shall cease to be outstanding following their issuance, or (v) April 15, 2027. The securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the shares of our common stock may not simultaneously engage in market making activities with respect to the shares of our common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the shares of our common stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders.

LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon by Morgan, Lewis & Bockius LLP.

EXPERTS

The consolidated balance sheets of Leap Therapeutics, Inc. and Subsidiaries as of December 31, 2023 and 2022, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the years then ended have been audited by EisnerAmper LLP, independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements have been incorporated herein by reference in reliance on the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a Registration Statement on Form S-3 that we have filed with the SEC relating to the securities being offered hereby. This prospectus does not contain all of the information in the Registration Statement and its exhibits. The Registration Statement, its exhibits and the documents incorporated by reference in this prospectus and their exhibits, all contain information that is material to the offering of the securities hereby. Whenever a reference is made in this prospectus to any of our contracts or other documents, the reference may not be complete. You should refer to the exhibits that are a part of the Registration Statement in order to review a copy of the contract or documents. The Registration Statement and the exhibits are available to the public over the Internet at the SEC's website at <http://www.sec.gov>.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Additionally, you may access our filings with the SEC through our website at <http://www.leaptx.com>. The information on our website is not part of this prospectus.

We will provide you without charge, upon your oral or written request, with a copy of any or all reports, proxy statements and other documents we file with the SEC, as well as any or all of the documents incorporated by reference in this prospectus or the Registration Statement (other than exhibits to such documents unless such exhibits are specifically incorporated by reference into such documents). Requests for such copies should be directed to:

Investor Relations
Leap Therapeutics, Inc.
47 Thorndike Street, Suite B1-1
Cambridge, Massachusetts 02141
Telephone number: (617) 714-0360

You should rely only on the information in this prospectus and the additional information described above and under the heading "Incorporation of Certain Information by Reference" below. We have not, and the selling stockholders have not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely upon it. The selling stockholders are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus was accurate on the date of the front cover of this prospectus only, and that any information we have incorporated by reference was accurate on the date of the document incorporated by reference only. Our business, financial condition, results of operations and prospects may have changed since such date.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with it into this prospectus, 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. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in documents filed earlier with the SEC or contained in this prospectus and any accompanying prospectus supplement.

We incorporate by reference the documents listed below that we have previously filed with the SEC:

- [our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on March 18, 2024;](#)
- our [Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 29, 2024,](#) to the extent incorporated by reference into our [Annual Report on Form 10-K for the year ended December 31, 2023;](#)
- our Current Reports on Form 8-K filed with the SEC on [January 16, 2024,](#) [January 23, 2024,](#) and [April 11, 2024,](#) including the exhibits attached thereto and filed therewith, to the extent the information in such reports is filed and not furnished; and
- our description of our common stock contained in the Registration Statement on [Form 8-A, filed on January 20, 2017,](#) including any amendments thereto or reports filed for the purposes of updating this description.

All reports and other documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the registration statement of which this prospectus is a part but before the termination of the offering of the securities hereunder will also be considered to be incorporated by reference into this prospectus from the date of the filing of such reports and documents, and will supersede the information herein; provided, however, that all reports or portions thereof that we “furnish” to the SEC will not be considered incorporated by reference into this prospectus. We undertake to provide without charge to each person (including any beneficial owner) who receives a copy of this prospectus, upon written or oral request, a copy of all of the preceding documents that are incorporated by reference (other than exhibits, unless the exhibits are specifically incorporated by reference into these documents). You may request a copy of these materials in the manner set forth under the heading “Where You Can Find More Information,” above.

**14,184,397 Shares
Common Stock**



PROSPECTUS

May 23, 2024
