

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

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

neubase

NeuBase Therapeutics, Inc.

(Exact name of Registrant as specified in its charter)

Delaware
*(State or other jurisdiction of
incorporation or organization)*

2384
*(Primary Standard Industrial
Classification Code Number)*

46-5622433
*(I.R.S. Employer
Identification Number)*

**350 Technology Drive, Fourth Floor
Pittsburgh, PA 15219
(412) 763-3350**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Dr. Dietrich Stephan
Chief Executive Officer
NeuBase Therapeutics, Inc.
350 Technology Drive, Fourth Floor
Pittsburgh, Pennsylvania 15219**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Jeffrey T. Hartlin
Samantha H. Eldredge
Paul Hastings LLP
1117 S. California Avenue
Palo Alto, California, 94304-1106
(650) 320-1800**

Approximate date of commencement of proposed sale to the public:

From time to time after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

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

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

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

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

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

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities, and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated July 28, 2023

Preliminary Prospectus



Up to 5,394,068 shares of Common Stock

Pursuant to this prospectus, the selling stockholders identified herein (the **“Selling Stockholders”**) are offering on a resale basis an aggregate of up to 5,394,068 shares of common stock of NeuBase Therapeutics, Inc. (the **“Company,” “we,” “us” or “our”**), par value \$0.0001 per share (the **“Common Stock”**), consisting of (a) up to an aggregate of 578,697 shares of Common Stock that are issuable upon exercise of unregistered long-term warrants (the **“RD Series A Warrants”**) (b) up to an aggregate of 578,697 shares of Common Stock that are issuable upon exercise of unregistered short-term warrants (the **“RD Series B Warrants”**), (c) up to an aggregate of 1,366,829 shares of Common Stock that are issuable upon exercise of unregistered pre-funded warrants (the **“PIPE Pre-Funded Warrants”**), (d) up to 1,366,829 shares of Common Stock that are issuable upon exercise of unregistered long-term warrants (the **“PIPE Series A Warrants”**), (e) up to 1,366,829 shares of Common Stock that are issuable upon exercise of unregistered short-term warrants (the **“PIPE Series B Warrants”**), in each of cases of (a) through (e) purchased pursuant to securities purchase agreements by and between us and the Selling Stockholders, each dated June 28, 2023 (the **“Purchase Agreements”**), and (f) up to 136,187 shares of Common Stock that are issuable upon the exercise of certain private placement warrants (the **“Placement Agent Warrants”**), together with the RD Series A Warrants, the RD Series B Warrants, the PIPE Pre-Funded Warrants, the PIPE Series A Warrants and the PIPE Series B Warrants, the **“Warrants”**) issued to designees of H.C. Wainwright & Co., LLC, our placement agent (the **“Placement Agent”**) pursuant to an engagement letter in connection with the Purchase Agreements and the offerings contemplated thereunder.

We will not receive any of the proceeds from the sale by the Selling Stockholders of the Common Stock. Upon any exercise of the Warrants by payment of cash, however, we will receive the exercise price of the Warrants, which, if exercised in cash with respect to the 5,394,068 shares of Common Stock offered hereby, would result in gross proceeds to us of approximately \$9.5 million. However, we cannot predict when and in what amounts or if the Warrants will be exercised by payments of cash and it is possible that the Warrants may expire and never be exercised, in which case we would not receive any cash proceeds. In addition, upon exercise of any of the RD Series B Warrants or the PIPE Series B Warrants, we will pay the Placement Agent a cash fee equal to 8.0% of the gross proceeds received from the exercise of the RD Series B Warrants or the PIPE Series B Warrants (including a 1.0% management fee) and will also issue to the Placement Agent (or its designees) additional Placement Agent Warrants to purchase a number of shares of Common Stock equal to 7.0% of the aggregate number of shares of Common Stock issued upon such exercise of the RD Series B Warrants or the PIPE Series B Warrants.

The Selling Stockholders may sell or otherwise dispose of the Common Stock covered by this prospectus in a number of different ways and at varying prices. We provide more information about how the Selling Stockholders may sell or otherwise dispose of the Common Stock covered by this prospectus in the section entitled **“Plan of Distribution”** on page 9. Discounts, concessions, commissions and similar selling expenses attributable to the sale of Common Stock covered by this prospectus will be borne by the Selling Stockholders. We will pay all expenses (other than discounts, concessions, commissions and similar selling expenses) relating to the registration of the Common Stock with the Securities and Exchange Commission (the **“SEC”**).

Our Common Stock is listed on the Nasdaq Capital Market under the symbol “NBSE.” On July 27, 2023, the last reported sale price of our Common Stock on the Nasdaq Capital Market was \$1.32 per share.

Investing in our securities involves a high degree of risk. Before making any investment in these securities, you should consider carefully the risks and uncertainties described in the section entitled **“Risk Factors”** beginning on page 5 of this prospectus.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2023

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ABOUT THIS PROSPECTUS

This prospectus relates to the resale by the Selling Stockholders identified in this prospectus under the caption “[Selling Stockholders](#),” from time to time, of up to an aggregate of 5,394,068 shares of Common Stock. We are not selling any shares of Common Stock under this prospectus, and we will not receive any proceeds from the sale of shares of Common Stock offered hereby by the Selling Stockholders, although we may receive cash from the exercise of the Warrants.

You should rely only on the information provided in this prospectus, including any information incorporated by reference. We have not authorized anyone to provide you with any other information and we take no responsibility for, and can provide no assurances as to the reliability of, any other information that others may give you. The information contained in this prospectus speaks only as of the date set forth on the cover page and may not reflect subsequent changes in our business, financial condition, results of operations and prospects.

We are not, and the Selling Stockholders are not, making offers to sell these securities in any jurisdiction in which an offer or solicitation is not authorized or permitted or in which the person making such offer or solicitation is not qualified to do so or to any person to whom it is unlawful to make such an offer or solicitation. You should read this prospectus, including any information incorporated by reference, in its entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections entitled “[Where You Can Find More Information](#)” and “[Incorporation of Certain Information by Reference](#).”

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated herein by reference contain “forward-looking statements” by us within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act, including, without limitation, statements as to expectations, beliefs and strategies regarding the future. These 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. These forward-looking statements rely on a number of assumptions concerning future events and include, but are not limited to, statements relating to:

- risks and uncertainties associated with our research and development activities, including our preclinical studies;
- the potential effects of public health outbreaks, epidemics or pandemics, such as the coronavirus (COVID-19) pandemic;
- the timing or likelihood of regulatory filings and approvals or of alternative regulatory pathways for our product candidates;
- the potential market opportunities for commercializing our product candidates;
- our expectations regarding the potential market size and the size of the patient populations for our product candidates, if approved for commercial use, and our ability to serve such markets;
- estimates of our expenses, future revenue, capital requirements and our needs for additional financing;
- our ability to continue as a going concern;
- our ability to develop, acquire and advance our product candidates into, and successfully complete, preclinical studies and clinical trials and obtain regulatory approvals;
- the implementation of our business model and strategic plans for our business and product candidates;
- the initiation, cost, timing, progress and results of current preclinical studies and future preclinical studies and clinical trials, and our research and development programs;
- the terms of future licensing arrangements, and whether we can enter into such arrangements at all;
- timing and receipt or payments of licensing and milestone revenues or payments, if any;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and our ability to operate our business without infringing the intellectual property rights of others;
- regulatory developments in the United States and foreign countries;
- the performance of our third party suppliers and manufacturers;
- our ability to maintain and establish collaborations or obtain additional funding;
- the success of competing therapies that are currently or may become available;

- our financial performance; and
- developments and projections relating to our competitors and our industry.

Any forward-looking statements should be considered in light of these factors. Words such as “anticipates,” “believes,” “forecasts,” “potential,” “goal,” “contemplates,” “expects,” “intends,” “plans,” “projects,” “hopes,” “seeks,” “estimates,” “strategy,” “continues,” “ongoing,” “opportunity,” “could,” “would,” “should,” “likely,” “will,” “may,” “can,” “designed to,” “future,” “foreseeable future” and similar expressions and variations, and negatives of these words, identify forward-looking statements. These forward-looking statements are based on the expectations, estimates, projections, beliefs and assumptions of our management based on information currently available to management, all of which are subject to change. These forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that could cause actual results to differ materially from the results contemplated by the forward-looking statements. Many of the important factors that will determine these results and values are beyond our ability to control or predict. You are cautioned not to put undue reliance on any forward-looking statements. Except as otherwise required by law, we do not assume any obligation to update any forward-looking statements.

In evaluating an investment in our securities, you should carefully consider the discussion of risks and uncertainties described under the heading “Risk Factors” contained in this prospectus, and under similar headings in other documents, including in our Annual Report on Form 10-K for the year ended September 30, 2022 and in other filings with the SEC, that are incorporated by reference in this prospectus. You should carefully read this prospectus, together with the information incorporated by reference in this prospectus as described under the headings “[Where You Can Find More Information](#)” and “[Incorporation of Certain Information by Reference](#)”, completely and with the understanding that our actual future results may be materially different from what we expect.

All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by our cautionary statements. The forward-looking statements included or incorporated by reference herein are made only as of the date of this prospectus (or as of the date of any such document incorporated by reference). We do not intend, and undertake no obligation, to update these forward-looking statements, except as required by law.

PROSPECTUS SUMMARY

The following summary highlights certain information contained elsewhere in this prospectus and the documents incorporated by reference herein. This summary provides an overview of selected information and does not contain all of the information you should consider in making your investment decision. Therefore, you should read the entire prospectus and the documents incorporated by reference herein carefully before investing in our securities. Investors should carefully consider the information set forth under “[Risk Factors](#)” beginning on page 5 of this prospectus and the financial statements and other information incorporated by reference in this prospectus.

Overview

We have designed, built, and validated a new technology platform (a peptide nucleic acid antisense oligonucleobase platform, which we call PATrOL™) that can uniquely Drug the Genome™ to address the three disease-causing mechanisms (*i.e.*, gain-of-function, change-of-function, or loss-of-function of a gene), without the limitations of early precision genetic medicines. The technology is predicated on synthetic peptide nucleic acid (“PNA”) chemistry and can directly engage the genome in a sequence-specific manner and address root causality of diseases. These compounds operate by temporarily engaging the genome (or single and double-stranded RNA targets, if desired) and interacting with cellular machinery that processes mutant genes to halt their ability to manifest a disease.

We have repeatedly demonstrated in proof-of-concept preclinical animal studies the ability to address multiple disease-causing genes, and different causal mechanisms, to resolve the disease state without the limitations of early genetic medicine technologies. As further validation of our PATrOL™ platform’s capabilities, in FY2021 and FY2022, we described data illustrating that our first-in-class platform technology can address various types of causal insults by Drugging the Genome™ in animal models of a variety of human diseases after patient-friendly routes of administration and does so in a well-tolerated manner.

We are developing precision genetic medicines targeting rare, monogenic diseases for which there are no approved therapies, as well as more common genetic disorders, including cancers that are resistant to current therapeutic approaches. Our disclosed pipeline includes therapeutic candidates for the treatment of DM1, HD, as well as cancer-driving point mutations in *KRAS*, G12V and G12D, which are involved in many tumor types and have historically been “undruggable”. In October 2022, we announced plans to expand our focus to include the advancement of the differentiated gene editing capabilities of its platform. We are currently identifying and evaluating multiple indications for potential future development.

Recent Developments

Change in Year End

On April 21, 2023, our Board of Directors approved a change in our fiscal year end from September 30 to December 31, effective for the fiscal year beginning January 1, 2023 and ending December 31, 2023. As a result of the change in year end, we filed a Transition Report on Form 10-QT for the period from October 1, 2022 through December 31, 2022. Our 2023 fiscal year will run from January 1, 2023 through December 31, 2023.

Reverse Stock Split

As previously disclosed on a Current Report on Form 8-K filed on June 14, 2023, on June 14, 2023, we filed a Certificate of Amendment to our Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware to effect a 1-for-20 reverse stock split of our shares of Common Stock.

June 2023 Offerings

On June 28, 2023, we entered into a securities purchase agreement (the “**Registered Direct Purchase Agreement**”) with the selling stockholders identified herein (the “**Selling Stockholders**”) in connection with a registered direct offering (the “**Registered Direct Offering**”) and concurrent private placement with an institutional investor (the “**Registered Direct Purchaser**”). On June 28, 2023, we also entered into a securities purchase agreement (the “**PIPE Purchase Agreement**”) and, together with the Registered Direct Purchase Agreement, the “**Purchase Agreements**”) and a registration rights agreement (the “**Registration Rights Agreement**”) with the Selling Stockholders in connection with a concurrent private placement (the “**PIPE Private Placement**”) with the same institutional investor (the “**PIPE Purchaser**”) and, together with the Registered Direct Purchaser, the “**Purchaser**”).

Pursuant to the Registered Direct Purchase Agreement, we agreed to offer and sell in the Registered Direct Offering 187,700 shares of Common Stock and pre-funded warrants (the “**Pre-Funded Warrants**”) to purchase up to an aggregate of 390,997 shares of Common Stock. The Pre-Funded Warrants have an exercise price of \$0.001 per share, are immediately exercisable and can be exercised at any time after their original issuance until such Pre-Funded Warrants are exercised in full. Each share of Common Stock is being sold at an offering price of \$2.57 per share, and each Pre-Funded Warrant is being sold at an offering price of \$2.569, which is equal to the purchase price per share of Common Stock less \$0.001.

Pursuant to the Registered Direct Purchase Agreement, in a concurrent private placement, we also agreed to issue the RD Series A Warrants to purchase up to an aggregate of 578,697 shares of Common Stock and the RD Series B Warrants to purchase up to an aggregate of 578,697 shares of Common Stock. Each RD Series A Warrant has an exercise price of \$2.32 per share, is exercisable immediately upon issuance, and will expire five and one-half years following the date of issuance. Each RD Series B Warrant has an exercise price of \$2.32 per share, is exercisable immediately upon issuance, and will expire 18 months following the date of issuance.

Pursuant to the PIPE Purchase Agreement, we agreed to offer and sell in the PIPE Private Placement unregistered pre-funded warrants (the “**PIPE Pre-Funded Warrants**”) to purchase up to an aggregate of 1,366,829 shares of Common Stock, at an offering price of \$2.569. The PIPE Pre-Funded Warrants have an exercise price of \$0.001 per share, are immediately exercisable and can be exercised at any time after their original issuance until such PIPE Pre-Funded Warrants are exercised in full. Pursuant to the PIPE Purchase Agreement, we also agreed to issue to the PIPE Purchaser unregistered long-term warrants to purchase up to 1,366,829 shares of Common Stock (the “**PIPE Series A Warrants**”) and unregistered short-term warrants to purchase up to 1,366,829 shares of Common Stock (the “**PIPE Series B Warrants**”). Each PIPE Series A Warrant has an exercise price of \$2.32 per share, is exercisable immediately upon issuance, and will expire five and one-half years following the date of issuance. Each PIPE Series B Warrant has an exercise price of \$2.32 per share, is exercisable immediately upon issuance, and will expire 18 months following the date of issuance.

We received aggregate gross proceeds of \$5.0 million from the Registered Direct Offering and PIPE Private Placement (collectively, the “**Offerings**”), before deducting placement agent fees and other estimated offering expenses payable by us.

Pursuant to an engagement letter, dated as of June 12, 2023, as amended on June 28, 2023 (as amended, the “**Engagement Letter**”), between us and the Placement Agent, we agreed to pay the Placement Agent a cash fee equal to 8.0% of the gross proceeds received from the Purchaser (including a 1.0% management fee) and also agreed to issue to the Placement Agent (or its designees) Placement Agent Warrants to purchase up to 136,187 shares of Common Stock (which represents 7.0% of the aggregate number of shares of Common Stock, Pre-Funded Warrants and PIPE Pre-Funded Warrants sold in the Offerings) on substantially the same terms as the PIPE Series A Warrants and the PIPE Series B Warrants except that the exercise price of the Placement Agent Warrants is \$3.2125 (or 125% of the offering price per share of Common Stock in the Registered Direct Offering) and an expiration date of June 28, 2028, which is the five-year anniversary of the commencement of the sales pursuant to the Offerings. We have also agreed to pay the Placement Agent in connection with the Offerings \$75,000 for non-accountable expenses and \$7,388.85 for clearing fees. Pursuant to the Engagement Letter, we also agreed that, upon exercise of any of the RD Series B Warrants or the PIPE Series B Warrants, we will pay the Placement Agent a cash fee equal to 8.0% of the gross proceeds received from the exercise of the RD Series B Warrants or the PIPE Series B Warrants (including a 1.0% management fee) and will also issue to the Placement Agent (or its designees) additional Placement Agent Warrants to purchase a number of shares of Common Stock equal to 7.0% of the aggregate number of shares of Common Stock issued upon such exercise of the RD Series B Warrants or the PIPE Series B Warrants.

Pursuant to the terms of the Registration Rights Agreement and the Engagement Letter we have agreed to register for resale the shares of Common Stock issuable upon the exercise of the RD Series A Warrants, the RD Series B Warrants, the PIPE Pre-Funded Warrants, the PIPE Series A Warrants, the PIPE Series B Warrants and the Placement Agent Warrants, in each case on or prior to July 28, 2023. We shall use commercially reasonable efforts to cause the registration statement covering the aforementioned securities to be declared effective as promptly as possible after the filing thereof, but in any event no later than the 60th calendar day following the date of the Registration Rights Agreement (or in the event of a full review by the Securities and Exchange Commission (the “**SEC**”), the 90th calendar day following the date of the Registration Rights Agreement). Failure by us to meet the filing deadlines and other requirements set forth in the Registration Rights Agreement may subject us to certain liquidated damages.

The Offerings closed on June 30, 2023.

Corporate Information

We were incorporated under the laws of the State of Delaware on August 4, 2009, as successor to BBM Holdings, Inc. (formerly known as Prime Resource, Inc., which was organized March 29, 2002 as a Utah corporation) pursuant to a reincorporation merger. On August 4, 2009, we reincorporated in Delaware as “Ohr Pharmaceutical, Inc.” On July 12, 2019, we completed a reverse merger transaction (the “**Merger**”) with NeuBase Corporation (formerly known as NeuBase Therapeutics, Inc.), a Delaware corporation, and, upon completion of the Merger, we changed our name to “NeuBase Therapeutics, Inc.” Shares of our Common Stock commenced trading on the Nasdaq Capital Market under the ticker symbol “NBSE” as of market open on July 15, 2019.

Our principal executive offices are located at 350 Technology Drive, Fourth Floor, Pittsburgh, PA 15219, and our telephone number is (412) 763-3350. Our website is located at www.neubasetherapeutics.com. Any information contained on, or that can be accessed through, our website is not incorporated by reference into, nor is it in any way part of, this prospectus and should not be relied upon in connection with making any decision with respect to an investment in our securities. We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. You may obtain any of the documents filed by us with the SEC at no cost from the SEC’s website at <http://www.sec.gov>.

We are a “smaller reporting company” as defined in Rule 12b-2 of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), and have elected to take advantage of certain of the scaled disclosure available for smaller reporting companies in this prospectus as well as our filings under the Exchange Act.

THE OFFERING

The Selling Stockholders identified in this prospectus are offering on a resale basis a total of 5,394,068 shares of Common Stock, consisting of (a) 578,697 shares of Common Stock underlying the RD Series A Warrants, (b) 578,697 shares of Common Stock underlying the RD Series B Warrants, (c) 1,366,829 shares of Common Stock underlying the PIPE Pre-Funded Warrants, (d) 1,366,829 shares of Common Stock underlying the PIPE Series A Warrants, (e) 1,366,829 shares of Common Stock underlying the PIPE Series B Warrants and (f) 136,187 shares of Common Stock underlying the Placement Agent Warrants, as more fully described below.

Common Stock to be offered by the Selling Stockholders	Up to 5,394,068 shares of Common Stock
Common Stock outstanding prior to this offering	2,083,143 shares of Common Stock as of July 21, 2023
Common Stock to be outstanding after this offering	7,477,211 shares of Common Stock, assuming the exercise of all of the Warrants.
Use of proceeds	We will not receive any proceeds from the sale of the shares of Common Stock by the Selling Stockholders, except for the Warrant exercise price paid for the Common Stock offered hereby and issuable upon the exercise of the Warrants. See “ Use of Proceeds ” on page 6 of this prospectus.
Risk factors	You should read the “ Risk Factors ” section beginning on page 5 of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our securities.
Nasdaq Capital Market symbol	Our Common Stock is listed on The Nasdaq Capital Market under the symbol “NBSE.” We do not intend to apply for listing of the Warrants on any securities exchange or nationally recognized trading system.

The number of shares of Common Stock to be outstanding after this offering is based on 2,083,143 shares of Common Stock outstanding as of July 21, 2023 and excludes the following as of such date:

- 314,672 shares of Common Stock issuable upon exercise of options outstanding as of July 21, 2023, with a weighted average exercise price of \$55.91 per share;
- 189,750 shares of Common Stock issuable upon exercise of warrants outstanding as of July 21, 2023, with a weighted average exercise price of \$2.57 per share;
- 19,823 shares of Common Stock issuable upon vesting of restricted stock unit awards outstanding as of July 21, 2023, with a weighted-average grant date fair value of \$4.00 per share;
- 13,334 shares of Common Stock available for issuance pursuant to our 2016 Consolidated Stock Incentive Plan; and
- 122,328 shares of Common Stock available for issuance pursuant to our 2019 Stock Incentive Plan.

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RISK FACTORS

Investing in our securities involves a high degree of risk. Before investing in our securities, you should carefully consider the risks, uncertainties and assumptions contained in this prospectus and discussed under the heading “[Risk Factors](#)” included in our Annual Report on Form 10-K for the year ended September 30, 2022, as revised or supplemented by subsequent filings, which are on file with the SEC and are incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Our business, financial condition, results of operations and future growth prospects could be materially and adversely affected by any of these risks. In these circumstances, the market price of our Common Stock could decline, and you may lose all or part of your investment.

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USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the Common Stock by the Selling Stockholders. Certain of the shares offered hereby are issuable upon the exercise of the Warrants. Upon exercise of such Warrants for cash, we will receive the applicable cash exercise price paid by the holders of the Warrants for gross proceeds of approximately \$9.5 million (assuming the full exercise of the Warrants). However, we cannot predict when and in what amounts or if the Warrants will be exercised by payments of cash and it is possible that the Warrants may expire and never be exercised, in which case we would not receive any cash proceeds. In addition, upon exercise of any of the RD Series B Warrants or the PIPE Series B Warrants, we will pay the Placement Agent a cash fee equal to 8.0% of the gross proceeds received from the exercise of the RD Series B Warrants or the PIPE Series B Warrants (including a 1.0% management fee) and will also issue to the Placement Agent (or its designees) additional Placement Agent Warrants to purchase a number of shares of Common Stock equal to 7.0% of the aggregate number of shares of Common Stock issued upon such exercise of the RD Series B Warrants or the PIPE Series B Warrants.

We intend to use any proceeds received by us from the cash exercise of the Warrants for working capital and general corporate purposes.

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DIVIDEND POLICY

We have never paid cash dividends on our Common Stock and we do not anticipate paying cash dividends in the foreseeable future, but intend to retain our capital resources for reinvestment in our business. Any future determination to pay cash dividends on our Common Stock will be at the discretion of our board of directors and will be dependent upon our financial condition, results of operations, capital requirements and other factors as the board of directors deems relevant.

DETERMINATION OF OFFERING PRICE

The prices at which the shares of Common Stock covered by this prospectus may actually be sold will be determined by the prevailing public market price for shares of our Common Stock or by negotiations between the Selling Stockholders and buyers of our Common Stock in private transactions or as otherwise described in “[Plan of Distribution](#).”

SELLING STOCKHOLDERS

The Common Stock being offered by the Selling Stockholders are those previously issued to the Selling Stockholders, and those issuable to the Selling Stockholders, upon exercise of the Warrants. For additional information regarding the issuances of those shares of Common Stock and Warrants, see “*Prospectus Summary—Recent Developments—June 2023 Offerings*” above. We are registering the shares of Common Stock in order to permit the Selling Stockholders to offer the shares for resale from time to time. Except for the ownership of the shares of Common Stock and the Warrants, the Selling Stockholders have not had any material relationship with us within the past three years.

The table below lists the Selling Stockholders and other information regarding the beneficial ownership of the shares of Common Stock by each of the Selling Stockholders. The second column lists the number of shares of Common Stock beneficially owned by each Selling Stockholder, based on its ownership of the shares of Common Stock and Warrants, as of July 21, 2023, assuming exercise of the Warrants held by the Selling Stockholders on that date, without regard to any limitations on exercises.

The third column lists the shares of Common Stock being offered by this prospectus by the Selling Stockholders.

In accordance with the terms of a registration rights agreement with the Selling Stockholders, this prospectus generally covers the resale of the maximum number of shares of Common Stock issuable upon exercise of the Warrants, determined as if the outstanding Warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the Registration Rights Agreement, without regard to any limitations on the exercise of the Warrants. The fourth column assumes the sale of all of the shares offered by the Selling Stockholders pursuant to this prospectus.

Under the terms of the Warrants, a Selling Stockholder may not exercise the Warrants to the extent such exercise would cause such Selling Stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of Common Stock which would exceed 4.99% or 9.99%, as applicable, of our then outstanding Common Stock following such exercise, excluding for purposes of such determination shares of Common Stock issuable upon exercise of such Warrants which have not been exercised. The number of shares in the second and fourth columns do not reflect this limitation. The Selling Stockholders may sell all, some or none of their shares in this offering. See “[Plan of Distribution](#).”

Name of Selling Stockholder	Number of Shares of Common Stock Beneficially Owned Prior to Offering ⁽¹⁾	Maximum Number of Shares of Common Stock to be Sold in this Offering	Number of Shares of Common Stock Beneficially Owned After Offering	Percentage of Shares Beneficially Owned after Offering ⁽¹⁾
Armistice Capital, LLC. ⁽²⁾	5,671,052	5,257,881	413,171	5.5%
Michael Vasinkevich ⁽³⁾	87,330	87,330	0	0%
Noam Rubinstein ⁽³⁾	42,899	42,899	0	0%
Craig Schwabe ⁽³⁾	4,596	4,596	0	0%
Charles Worthman ⁽³⁾	1,362	1,362	0	0%

(1) The ability to exercise the Warrants and Pre-Funded Warrants, as applicable, held by the Selling Stockholders is subject to a beneficial ownership limitation that, at the time of initial issuance of the Warrants and Pre-Funded Warrants, as applicable, was capped at either 4.99% or 9.99% beneficial ownership of the Company’s issued and outstanding Common Stock (post-exercise). These beneficial ownership limitations may be adjusted up or down, subject to providing advanced notice to the Company. Beneficial ownership as reflected in the selling stockholder table reflects the total number of shares potentially issuable underlying the Warrants and Pre-Funded Warrants, as applicable, and does not give effect to these beneficial ownership limitations. Accordingly, actual beneficial ownership, as calculated in accordance with Section 13(d) and Rule 13d-3 thereunder may be lower than as reflected in the table.

(2) The securities are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the “Master Fund”), and may be deemed to be beneficially owned by: (i) Armistice Capital, LLC (“Armistice Capital”), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. The warrants are subject to a beneficial ownership limitation of 4.99%, which such limitation restricts the Selling Stockholder from exercising that portion of the warrants that would result in the Selling Stockholder and its affiliates owning, after exercise, a number of shares of Common Stock in excess of the beneficial ownership limitation. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.

(3) The selling stockholder is affiliated with H.C. Wainwright & Co., LLC, a registered broker dealer with a registered address of H.C. Wainwright & Co., LLC, 430 Park Ave, 3rd Floor, New York, NY 10022, and has sole voting and dispositive power over the securities held. The number of shares beneficially owned prior to this offering consist of shares of Common Stock issuable upon exercise of placement agent warrants, which were received as compensation in connection with the concurrent Registered Direct Offering and the Private Placements consummated by us in June 2023. The selling stockholder acquired the placement agent warrants in the ordinary course of business and, at the time the placement agent warrants were acquired, the selling stockholder had no agreement or understanding, directly or indirectly, with any person to distribute such securities.

PLAN OF DISTRIBUTION

Each Selling Stockholder of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the principal Trading Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. 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 of 1933, as amended (the “**Securities Act**”), if available, rather than under this prospectus. Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-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 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

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 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. Each Selling Stockholder has informed us that it does not have 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.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the Selling Stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for us to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby 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.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the 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 Common Stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

DESCRIPTION OF CAPITAL STOCK

General Matters

The following description summarizes the most important terms of our capital stock. Because it is only a summary of the provisions of our certificate of incorporation, as amended (the “**Certificate of Incorporation**”), and bylaws, as amended (the “**Bylaws**”), it does not contain all of the information that may be important to you. For a complete description of the matters set forth in this “Description of Capital Stock,” you should refer to our Certificate of Incorporation and Bylaws, each of which are included as exhibits to the registration statement of which this prospectus is a part, and to the applicable provisions of Delaware law.

As of July 21, 2023, our authorized capital stock consisted of 250,000,000 shares of Common Stock and 10,000,000 shares of preferred stock, \$0.0001 par value per share.

Common Stock

Dividend Rights. We have never paid cash dividends on our Common Stock. Moreover, we do not anticipate paying periodic cash dividends on Common Stock for the foreseeable future. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon its earnings, if any, capital requirements, operating and financial conditions and on such other factors as our board of directors deems relevant.

Preferred Stock

We currently have no outstanding shares of Preferred Stock. Under our Certificate of Incorporation, our board of directors has the authority, without further action by stockholders, to designate one or more series of Preferred Stock and to fix the voting powers, designations, preferences, limitations, restrictions and relative rights granted to or imposed upon the Preferred Stock, including dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference and sinking fund terms, any or all of which may be preferential to or greater than the rights of our Common Stock.

Our board of directors may authorize the issuance of Preferred Stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of Common Stock. The issuance of Preferred Stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control and may adversely affect the market price of the Common Stock and the voting and other rights of the holders of Common Stock.

Our board of directors may specify the following characteristics of any Preferred Stock:

- the designation and stated value, if any, of the class or series of Preferred Stock;
- the number of shares of the class or series of Preferred Stock offered, and the liquidation preference, if any, per share;
- the dividend rate(s), period(s) or payment date(s) or method(s) of calculation, if any, applicable to the class or series of Preferred Stock;
- whether dividends, if any, are cumulative or non-cumulative and, if cumulative, the date from which dividends on the class or series of Preferred Stock will accumulate;

- the provisions for a sinking fund, if any, for the class or series of Preferred Stock;
- the provision for redemption, if applicable, of the class or series of Preferred Stock;

- the terms and conditions, if applicable, upon which the class or series of Preferred Stock will be convertible into Common Stock, including the conversion price or manner of calculation and conversion period;
- voting rights, if any, of the class or series of Preferred Stock;
- the relative ranking and preferences of the class or series of Preferred Stock as to dividend rights and rights, if any, upon the liquidation, dissolution or winding up of our affairs;
- any limitations on issuance of any class or series of Preferred Stock ranking senior to or on a parity with the class or series of Preferred Stock as to dividend rights and rights, if any, upon liquidation, dissolution or winding up of our affairs; and
- any other specific terms, preferences, rights, limitations or restrictions of the class or series of Preferred Stock.

Anti-Takeover Effects of Certain Provisions of our Certificate of Incorporation, Bylaws and the General Corporation Law of the State of Delaware

Certain provisions of Delaware law and our Certificate of Incorporation contain provisions that could make the following transactions more difficult: acquisition of our Company by means of a tender offer; acquisition of our Company 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 capital stock.

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 our Company 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 our Company 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 General Corporation Law of the State of Delaware (the “**DGCL**”), which prohibits persons deemed to be “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 the Common Stock.

Undesignated Preferred Stock

The ability to authorize undesignated Preferred Stock will make 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 change 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.

Elimination of Stockholder Action by Written Consent

Our Certificate of Incorporation eliminates the right of stockholders to act by written consent without a meeting.

Classified Board; Election and Removal of Directors; Filling Vacancies

Our board of directors are divided into three classes. 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. At all meetings of stockholders for the election of directors, a plurality of the votes cast is sufficient to elect each director. Our 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 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 our Company, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Choice of Forum

Our Certificate of Incorporation provides 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: (a) any derivative action or proceeding brought on our behalf; (b) any action asserting a claim of breach of fiduciary duty owed by any director, officer, employee, agent or stockholder of ours to us or our stockholders, creditors or other constituents; (c) any action asserting a claim against us arising pursuant to the DGCL, the Certificate of Incorporation or the Bylaws; or (d) any action asserting a claim governed by the internal affairs doctrine. Such exclusive forum provision, however, does not apply to suits brought to enforce any liability or duty created by the Securities Act or the Exchange Act, or any other claim for which the federal courts have exclusive jurisdiction. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the choice of forum provision will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. It could apply, however, to a suit that falls within one or more of the categories enumerated in the choice of forum provision and asserts claims under the Securities Act inasmuch as Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. There is uncertainty as to whether a court would enforce this

provision with respect to claims under the Securities Act.

However, the Certificate of Incorporation does not relieve us of our duty to comply with federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations. Our Certificate of Incorporation also provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and consented to this choice of forum provision.

This choice of forum provision in our Certificate of Incorporation may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with our Company or our directors, officers or other employees, which may discourage such lawsuits against our Company and our directors, officers and other employees. In addition, stockholders who do bring a claim in the Court of Chancery in the State of Delaware could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near Delaware. Furthermore, the enforceability of similar choice of forum provisions in other companies' governing documents has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable.

Amendment of Charter Provisions

The amendment of any of the above provisions in our Certificate of Incorporation, except for the provision making it possible for our board of directors to issue undesignated Preferred Stock, would require approval by a stockholder vote by the holders of at least 66 2/3% of the voting power of the then outstanding voting stock.

The provisions of the DGCL and our Certificate of Incorporation 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 the 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.

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is Standard Registrar and Transfer Company. The transfer agent and registrar's address is 440 East 400 South, Suite 200, Salt Lake City, UT 84111.

Listing

Our Common Stock is listed on the Nasdaq Capital Market under the symbol "NBSE."

LEGAL MATTERS

Certain legal matters relating to the issuance of the securities offered hereby will be passed upon for us by Paul Hastings LLP, Palo Alto, California.

EXPERTS

The consolidated financial statements of NeuBase Therapeutics, Inc. as of September 30, 2022 and 2021, incorporated herein by reference in this prospectus and in the registration statement, have been audited by Marcum LLP, independent registered public accounting firm, as set forth in their report, and are incorporated by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. Our filings with the SEC are available to the public at the SEC's Internet web site at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at www.neubasetherapeutics.com. Our website is not a part of this prospectus and is not incorporated by reference in this prospectus, and you should not consider the contents of our website in making an investment decision with respect to our Common Stock.

We have filed a registration statement, of which this prospectus is a part, covering the securities offered hereby. As allowed by SEC rules, this prospectus does not include all of the information contained in the registration statement and the included exhibits, financial statements and schedules. You are referred to the registration statement, the included exhibits, financial statements and schedules for further information. You should review the information and exhibits in the registration statement for further information about us and our subsidiaries and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we have filed with them, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. The documents we are incorporating by reference are:

- [Our Annual Report on Form 10-K for the year ended September 30, 2022, filed with the SEC on December 21, 2022;](#)
- [Our Quarterly Report on Form 10-Q for the quarter ended December 31, 2022, filed with the SEC on February 14, 2023](#) and our [Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, filed with the SEC on May 11, 2023;](#)
- [Our Transitional Report on Form 10-QT for the quarter ended December 31, 2022, filed with the SEC on June 5, 2023;](#)
- Our Current Reports on Form 8-K (other than portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits accompanying such reports that relate to such items) filed with the SEC on (i) [October 3, 2022](#), (ii) [October 14, 2022](#), (iii) [October 24, 2022](#), (iv) [December 29, 2022](#), (v) [March 29, 2023](#), (vi) [April 24, 2023](#), (vii) [May 18, 2023](#), (viii) [June 14, 2023](#) and (ix) [June 30, 2023](#); and

All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any report or document that is not deemed filed under such provisions, (1) on or after the date of filing of the registration statement containing this prospectus and prior to the effectiveness of the registration statement and (2) on or after the date of this prospectus until the earlier of the date on which all of the securities registered hereunder have been sold or the registration statement of which this prospectus forms a part has been withdrawn, shall be deemed incorporated by reference in this prospectus and to be a part of this prospectus from the date of filing of those documents and will be automatically updated and, to the extent described above, supersede information contained or incorporated by reference in this prospectus and previously filed documents that are incorporated by reference in this prospectus.

Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02, 7.01 or 9.01 of Form 8-K.

Upon written or oral request, we will provide without charge to each person, including any beneficial owner, to whom a copy of the prospectus is delivered a copy of any or all of the reports or documents incorporated by reference herein (other than exhibits to such documents, unless such exhibits are specifically incorporated by reference herein). You may request a copy of these filings, at no cost, by writing or telephoning us at the following address: NeuBase Therapeutics, Inc., 350 Technology Drive, Fourth Floor, Pittsburgh, PA 15219, telephone: (412) 763-3350. We maintain a website at www.neubasetherapeutics.com. You may access our definitive proxy statements on Schedule 14A, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and periodic amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus. We have not authorized anyone to provide you with any information that differs from that contained in this prospectus. Accordingly, you should not rely on any information that is not contained in this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of the front cover of this prospectus.

NeuBase Therapeutics, Inc.

neubase

Up to 5,394,068 shares of Common Stock

PROSPECTUS

, 2023

PART II

Information Not Required in Prospectus

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the fees and expenses payable in connection with the registration of the Common Stock hereunder. All amounts other than the SEC registration fees are estimates.

Item	Amount to be paid
SEC registration fees	\$ 930.28
Legal fees and expenses	75,000.00
Accounting fees and expenses	25,000.00
Printing and miscellaneous expenses	3,000.00
Total	<u>\$ 103,930.28</u>

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Registrant is a Delaware corporation. Reference is made to Section 102(b)(7) of the General Corporation Law of the State of Delaware (the "DGCL"), which enables a corporation in its original certificate of incorporation or an amendment thereto to eliminate or limit the personal liability of a director for violations of the director's fiduciary duty, except (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) pursuant to Section 174 of the DGCL (providing for liability of directors for unlawful payment of dividends or unlawful stock purchase or redemptions), or (4) for any transaction from which a director derived an improper personal benefit.

Reference also is made to Section 145 of the DGCL, which provides that a corporation may indemnify any persons, including officers and directors, who are, or are threatened to be made, parties to any threatened, pending or completed legal action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person was an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such officer,

director, employee or agent acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interest and, for criminal proceedings, had no reasonable cause to believe that his or her conduct was unlawful. A Delaware corporation may indemnify officers and directors in an action by or in the right of the corporation under the same conditions, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him against the expenses that such officer or director actually and reasonably incurred.

The Registrant's Amended and Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation"), eliminates the personal liability of directors to the fullest extent permitted by the DGCL and provides that the Registrant (1) shall indemnify and advance expenses to any person made or threatened to be made a party to an action, suit or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he or she, or his or her testator or intestate, is or was a director or officer of the Registrant or any predecessor of the Registrant, or serves or served at any other enterprise as a director or officer at the request of the Registrant or any predecessor to the Registrant and (2) may indemnify and advance expenses to any person made or threatened to be made a party to an action, suit or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he or she, or his or her testator or intestate, is or was an employee or agent of the Registrant or any predecessor of the Registrant, or serves or served at any other enterprise as an employee or agent at the request of the Registrant or any predecessor to the Registrant.

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The Registrant has an insurance policy that insures its directors and officers, within the limits and subject to the limitations of the policy, against certain expenses in connection with the defense of actions, suits or proceedings, and certain liabilities that might be imposed as a result of such actions, suits or proceedings, to which they are parties by reason of being or having been directors or officers.

The Registrant has indemnification agreements with each of its directors and executive officers that may be broader than the specific indemnification provisions contained in the DGCL. These indemnification agreements require the Registrant, among other things, to indemnify a director or officer, to the fullest extent permitted by applicable law, for certain expenses, including attorneys' fees, judgments, penalties, fines and settlement amounts actually and reasonably incurred by them in any action or proceeding arising out of their services as one of a director or officer of the Registrant, or any of the Registrant's subsidiaries or any other company or enterprise to which the person provides services at the Registrant's request, including liability arising out of negligence or active or passive misconduct by the director or officer. The Registrant believes that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

In the three years preceding the filing of this registration statement, the Registrant has issued the following securities that were not registered under the Securities Act.

On June 28, 2023, the Registrant entered into securities purchase agreements relating to (a) the registered direct offering and sale of 187,700 shares of Common Stock at a purchase price of \$2.57 per share and Pre-Funded Warrants to purchase 390,997 shares of Common Stock at an offering price of \$2.569, which is equal to the purchase price per share of Common Stock less \$0.001 to the Registered Direct Purchaser and (b) a concurrent private placement to the Registered Direct Purchaser, in which the Registrant issued RD Series A Warrants to purchase up to an aggregate of 578,697 shares of Common Stock and the RD Series B Warrants to purchase up to an aggregate of 578,697 shares of Common Stock, in each case, at an exercise price of \$2.32 per share exercisable immediately upon issuance, with an expiration of five and one-half years with respect to the RD Series A Warrants and eighteen months with respect to the RD Series B Warrants, in each case, following the date of issuance.

In addition, in a concurrent private placement to the Registered Direct Purchaser, the Registrant also issued pre-funded warrants to purchase up to an aggregate of 1,366,829 shares of Common Stock, at an offering price of \$2.569, unregistered long-term warrants with a five and one-half year term to purchase up to 1,366,829 shares of Common Stock at an exercise price of \$2.32 per share and unregistered short-term warrants with an eighteen month term to purchase up to 1,366,829 shares of Common Stock at an exercise price of \$2.32 per share.

Unless otherwise noted, all of the transactions described in Item 15 were exempt from registration under the Securities Act pursuant to Section 4(a)(2) of the Securities Act in that such sales did not involve a public offering.

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ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Exhibits

Exhibit Number	Description	Incorporated by Reference		
		Form	Date	Exhibit No.
2.1+	Agreement and Plan of Merger and Reorganization, dated as of January 2, 2019, by and among Ohr Pharmaceutical, Inc., Ohr Acquisition Com. and NeuBase Therapeutics, Inc.	Current Report on Form 8-K (File No. 001-35963)	1/3/2019	2.1
2.2	First Amendment to the Agreement and Plan of Merger and Reorganization, dated as of June 27, 2019, by and among Ohr Pharmaceutical, Inc., Ohr Acquisition Corp. and NeuBase Therapeutics, Inc.	Current Report on Form 8-K (File No. 001-35963)	7/3/2019	2.1
3.1	Amended and Restated Certificate of Incorporation of the Company.	Current Report on Form 8-K (File No. 001-35963)	7/12/2019	3.1
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Company, filed with the Secretary of State of the State of Delaware on June 14, 2023.	Current Report on Form 8-K (File No. 001-35963)	6/14/2023	3.1
3.3	Amended and Restated Bylaws of the Company.	Current Report on Form 8-K (File No. 001-35963)	9/23/2019	3.1

<u>4.1</u>	<u>Form of Series A Warrant issued to investors pursuant to the Securities Purchase Agreement, dated December 7, 2016, by and among Ohr Pharmaceutical, Inc. and the purchasers listed therein</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>12/8/2016</u>	<u>4.1</u>
<u>4.2</u>	<u>Form of Warrant issued to investors pursuant to the Securities Purchase Agreement, dated as of April 5, 2017, by and among Ohr Pharmaceutical, Inc. and the purchasers listed therein.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>4/6/2017</u>	<u>4.1</u>
<u>4.3</u>	<u>Purchase Agreement, dated December 28, 2022, by and between NeuBase Therapeutics, Inc. and Alumni Capital LP</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>12/29/2022</u>	<u>10.1</u>
<u>4.4</u>	<u>Form of Consulting Warrants</u>	<u>Annual Report on Form 10-K (File No. 001-35963)</u>	<u>8/15/2011</u>	<u>10.21</u>
<u>4.5</u>	<u>Form of Common Stock Certificate.</u>	<u>Registration Statement on Form S-8 (File No. 333-233346)</u>	<u>8/16/2019</u>	<u>4.17</u>
<u>4.6</u>	<u>Form of Series A Common Stock Purchase Warrant.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>6/30/2023</u>	<u>4.1</u>
<u>4.7</u>	<u>Form of Series B Common Stock Purchase Warrant.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>6/30/2023</u>	<u>4.2</u>
<u>4.8</u>	<u>Form of Pre-Funded Common Stock Purchase Warrant (Registered Direct Offering).</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>6/30/2023</u>	<u>4.3</u>

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<u>4.9</u>	<u>Form of Pre-Funded Common Stock Purchase Warrant (PIPE Private Placement).</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>6/30/2023</u>	<u>4.4</u>
<u>4.10</u>	<u>Form of Placement Agent Common Stock Purchase Warrant.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>6/30/2023</u>	<u>4.5</u>
<u>10.1†</u>	<u>Securities Purchase Agreement, dated June 28, 2023 (Registered Direct Offering).</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>6/30/2023</u>	<u>10.1</u>
<u>10.2†</u>	<u>Securities Purchase Agreement, dated June 28, 2023 (PIPE Private Placement).</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>6/30/2023</u>	<u>10.2</u>
<u>10.3#</u>	<u>Ohr Pharmaceutical, Inc. 2016 Consolidated Stock Incentive Plan.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>3/21/2016</u>	<u>10.1</u>
<u>10.4</u>	<u>Form of Stock Option Agreement (2016 Consolidated Stock Incentive Plan).</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>12/15/2017</u>	<u>10.11(b)</u>
<u>10.5</u>	<u>Form of Restricted Stock Agreement (2016 Consolidated Stock Incentive Plan).</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>12/15/2017</u>	<u>10.11(c)</u>
<u>10.6†</u>	<u>License Agreement, dated December 17, 2018, by and between NeuBase Therapeutics, Inc. and Carnegie Mellon University.</u>	<u>Registration Statement on Form S-4 (File No. 333-230168)</u>	<u>3/8/2019</u>	<u>10.15</u>
<u>10.7+</u>	<u>Amendment #1 to License Agreement, dated January 1, 2022, by and between NeuBase Therapeutics, Inc. and Carnegie Mellon University.</u>	<u>Annual Report on Form 10-K (File No. 001-35963)</u>	<u>12/21/2022</u>	<u>10.5</u>
<u>10.8</u>	<u>Form of NeuBase Therapeutics, Inc. Warrant Certificate.</u>	<u>Registration Statement on Form S-4 (File No. 333-230168)</u>	<u>3/8/2019</u>	<u>10.16</u>
<u>10.9#</u>	<u>NeuBase Therapeutics, Inc. 2018 Equity Incentive Plan.</u>	<u>Registration Statement on Form S-4 (File No. 333-230168)</u>	<u>3/8/2019</u>	<u>10.19</u>
<u>10.10#</u>	<u>Restricted Stock Purchase Agreement, made as of September 6, 2018, by and between NeuBase Therapeutics, Inc. and Dietrich A. Stephan.</u>	<u>Registration Statement on Form S-4 (File No. 333-230168)</u>	<u>3/8/2019</u>	<u>10.21</u>

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<u>10.11#</u>	<u>Amendment to Restricted Stock Purchase Agreement, made as of December 26, 2018, by and between NeuBase Therapeutics, Inc. and Dietrich A. Stephan.</u>	<u>Registration Statement on Form S-4 (File No. 333-230168)</u>	<u>3/8/2019</u>	<u>10.22</u>
<u>10.12#</u>	<u>Executive Employment Agreement, entered into as of December 22, 2018 and effective as of August 28, 2018, by and between NeuBase Therapeutics, Inc. and Dietrich A. Stephan.</u>	<u>Amendment No. 2 to Registration Statement on Form S-4 (File No. 333-230168)</u>	<u>5/7/2019</u>	<u>10.23</u>
<u>10.13</u>	<u>At-Will Employment, Confidential Information, Invention Assignment and Arbitration Agreement, dated December 22, 2018, by and between NeuBase Therapeutics, Inc. and Dietrich A. Stephan.</u>	<u>Amendment No. 2 to Registration Statement on Form S-4 (File No. 333-230168)</u>	<u>5/7/2019</u>	<u>10.24</u>

<u>10.14#</u>	<u>Offer of Employment, dated July 11, 2019, by and between NeuBase Therapeutics, Inc. and Dietrich A. Stephan.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>7/17/2019</u>	<u>10.1</u>
<u>10.15#</u>	<u>NeuBase Therapeutics, Inc. 2019 Stock Incentive Plan</u>	<u>Registration Statement on Form S-4 (File No. 333-230168)</u>	<u>3/8/2019</u>	<u>Annex E</u>
<u>10.16#</u>	<u>Form of Option Agreement under the NeuBase Therapeutics, Inc. 2019 Stock Incentive Plan.</u>	<u>Registration Statement on Form S-8 (File No. 333-233346)</u>	<u>8/16/2019</u>	<u>4.6</u>
<u>10.17#</u>	<u>Form of Option Agreement under the NeuBase Therapeutics, Inc. 2018 Equity Incentive Plan.</u>	<u>Registration Statement on Form S-8 (File No. 333-233346)</u>	<u>8/16/2019</u>	<u>4.8</u>
<u>10.18#</u>	<u>NeuBase Therapeutics, Inc. Outside Director Compensation Policy.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>9/12/2022</u>	<u>10.1</u>
<u>10.19</u>	<u>Sublease Agreement, dated as of March 12, 2019, by and between NeuBase Therapeutics, Inc. and StartUptown dba Avenu.</u>	<u>Annual Report on Form 10-K (File No. 001-35963)</u>	<u>1/10/2020</u>	<u>10.29</u>
<u>10.20</u>	<u>Amendment No. 1 to Sublease Agreement, dated as of May 21, 2019, by and between NeuBase Therapeutics, Inc. and StartUptown dba Avenu.</u>	<u>Annual Report on Form 10-K (File No. 001-35963)</u>	<u>1/10/2020</u>	<u>10.30</u>
<u>10.21</u>	<u>Amendment No. 2 to Sublease Agreement, dated as of July 29, 2019, by and between NeuBase Therapeutics, Inc. and StartUptown dba Avenu.</u>	<u>Annual Report on Form 10-K (File No. 001-35963)</u>	<u>1/10/2020</u>	<u>10.31</u>

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<u>10.22</u>	<u>Lease Extension to Sublease Agreement, dated as of February 26, 2020, by and between NeuBase Therapeutics, Inc. and StartUptown dba Avenu.</u>	<u>Quarterly Report on Form 10-Q (File No. 001-35963)</u>	<u>3/26/2020</u>	<u>10.1</u>
<u>10.23</u>	<u>Amendment No. 4 to Sublease Agreement, dated as of August 20, 2020.</u>	<u>Annual Report on Form 10-K (File No. 001-35963)</u>	<u>12/23/2020</u>	<u>10.26</u>
<u>10.24</u>	<u>Amendment No. 5 to Sublease Agreement, dated as of September 25, 2020.</u>	<u>Annual Report on Form 10-K (File No. 001-35963)</u>	<u>12/23/2020</u>	<u>10.27</u>
<u>10.25#</u>	<u>Offer Letter of Employment, dated July 22, 2020, by and between NeuBase Therapeutics, Inc. and William Mann.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>7/28/2020</u>	<u>10.1</u>
<u>10.26#</u>	<u>Offer Letter of Employment, dated January 10, 2022, by and between NeuBase Therapeutics, Inc. and Todd Branning.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>1/10/2022</u>	<u>10.1</u>
<u>10.27</u>	<u>Lease Agreement, dated as of October 2, 2020, by and between NeuBase Therapeutics, Inc. and 350 Technology Drive Partners, LLC.</u>	<u>Annual Report on Form 10-K (File No. 001-35963)</u>	<u>12/23/2020</u>	<u>10.30</u>
<u>10.28</u>	<u>First Amendment to Lease Agreement, dated December 28, 2020.</u>	<u>Quarterly Report on Form 10-Q (File No. 001-35963)</u>	<u>2/11/2021</u>	<u>10.2</u>
<u>10.29</u>	<u>Second Amendment to Lease Agreement, dated April 21, 2021.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>4/27/2021</u>	<u>10.1</u>
<u>10.30</u>	<u>Registration Rights Agreement, dated June 28, 2023.</u>	<u>Current Report on Form 8-K (File No. 001-35963)</u>	<u>6/30/2023</u>	<u>10.3</u>
<u>5.1*</u>	<u>Opinion of Paul Hastings LLP.</u>			
<u>23.1*</u>	<u>Consent of Marcum, LLP, an Independent Registered Public Accounting Firm.</u>			
<u>23.2*</u>	<u>Consent of Paul Hastings, LLP (included within exhibit 5.1).</u>			
<u>24.1*</u>	<u>Powers of Attorney (included on the signature page of Part II of the Registration Statement on Form S-1).</u>			
<u>107*</u>	<u>Filing Fee Table</u>			

* Filed herewith.

Indicates a management contract or compensatory plan or arrangement.

+ Certain portions of this Exhibit have been redacted pursuant to Item 601(b)(10) of Regulation S-K. The Company agrees to furnish supplementally an unredacted copy of this Exhibit to the SEC upon request.

† Non-material schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish supplemental copies of any of the omitted schedules and exhibits upon request by the SEC.

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto incorporated by reference herein.

ITEM 17. UNDERTAKINGS

(a) The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that Paragraphs (a)(1)(i), (ii), and (iii) of this section do not apply if the registration statement is on Form S-1, Form S-3, Form SF-3, or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) that are incorporated by reference in the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

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- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (i) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date;
- (5) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (6) Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is therefore unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

(b) The undersigned Registrant hereby undertakes that:

- (i) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.
- (ii) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Pittsburgh, State of Pennsylvania, on July 28, 2023.

NEUBASE THERAPEUTICS, INC.

By: /s/ Dietrich Stephan
Dr. Dietrich Stephan
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each of Dr. Dov A. Goldstein, Mr. Gerry J. McDougall, Dr. Franklyn G. Prendergast and Mr. Eric I. Richman constitutes and appoints Dr. Dietrich Stephan and Mr. Todd P. Branning, and each of them, and that Dr. Dietrich Stephan constitutes and appoints Mr. Todd P. Branning, and that Mr. Todd P. Branning constitutes and appoints Dr. Dietrich Stephan, as his true and lawful attorney-in-fact and agent, upon the action of such appointee, with full power of substitution and resubstitution, to do any and all acts and things and execute, in the name of the undersigned, any and all instruments which each of said attorneys-in-fact and agents may deem necessary or advisable in order to enable the Registrant to comply with the Securities Act of 1933, as amended (the "Securities Act"), and any requirements of the Securities and Exchange Commission (the "**Commission**") in respect thereof, in connection with the filing with the Commission of this Registration Statement on Form S-1 under the Securities Act, including specifically but without limitation, power and authority to sign the name of the undersigned to such Registration Statement, and any amendments to such Registration Statement (including post-effective amendments), and to file the same with all exhibits thereto and other documents in connection therewith, with the Commission, to sign any and all applications, Registration Statements, notices or other documents necessary or advisable to comply with applicable state securities laws, and to file the same, together with other documents in connection therewith with the appropriate state securities authorities, granting unto each of said attorneys-in-fact and agents full power and authority to do and to perform each and every act and thing requisite or necessary to be done in and about the premises, as fully and to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents may lawfully do or cause to be done by virtue hereof.

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

Signatures	Title	Date
/s/ Dietrich A. Stephan, Ph.D. Dietrich A. Stephan, Ph.D.	Chief Executive Officer and Director (Principal Executive Officer)	July 28, 2023
/s/ Todd P. Branning Todd P. Branning	Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	July 28, 2023
/s/ Dov A. Goldstein Dov A. Goldstein	Director	July 28, 2023
/s/ Gerald J. McDougall Gerald J. McDougall	Director	July 28, 2023
/s/ Franklyn G. Prendergast Franklyn G. Prendergast	Director	July 28, 2023
/s/ Eric I. Richman Eric I. Richman	Director	July 28, 2023

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July 28, 2023

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NeuBase Therapeutics, Inc.
350 Technology Drive
Pittsburgh, PA 15219

Re: NeuBase Therapeutics, Inc. Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to NeuBase Therapeutics, Inc., a Delaware corporation (the “**Company**”), in connection with the preparation and filing by the Company of a Registration Statement on Form S-1 (the “**Registration Statement**”) with the U.S. Securities and Exchange Commission (the “**Commission**”) under the Securities Act of 1933, as amended (the “**Securities Act**”), on or about the date hereof, with respect to the resale from time to time by the selling stockholders of the Company, as detailed in the Registration Statement (collectively, the “**Selling Stockholders**”), of up to 5,394,068 shares of the Company’s common stock, par value \$0.0001 per share (“**Common Stock**”), which consists of (a) up to an aggregate of 578,697 shares of Common Stock that are issuable upon exercise of unregistered long-term warrants (the “**RD Series A Warrants**”), (b) up to an aggregate of 578,697 shares of Common Stock that are issuable upon exercise of unregistered short-term warrants (the “**RD Series B Warrants**”), (c) up to an aggregate of 1,366,829 shares of Common Stock that are issuable upon exercise of unregistered pre-funded warrants (the “**PIPE Pre-Funded Warrants**”), (d) up to 1,366,829 shares of Common Stock that are issuable upon exercise of unregistered long-term warrants (the “**PIPE Series A Warrants**”), (e) up to 1,366,829 shares of Common Stock that are issuable upon exercise of unregistered short-term warrants (the “**PIPE Series B Warrants**”), in each of the cases of (a) through (e), purchased pursuant to the Purchase Agreements (as defined below), and (f) up to 136,187 shares of Common Stock that are issuable upon the exercise of certain private placement warrants (the “**Placement Agent Warrants**”), and, collectively with the RD Series A Warrants, the RD Series B Warrants, the PIPE Pre-Funded Warrants, the PIPE Series A Warrants and the PIPE Series B Warrants, the “**Warrants**”) issued to designees of H.C. Wainwright & Co., LLC, the Company’s placement agent (the “**Placement Agent**”) pursuant to an engagement letter, dated as of June 12, 2023, as amended on June 28, 2023 (the “**Engagement Letter**”). The shares of Common Stock issuable upon exercise of the Warrants described in clauses (a) through (f) above are referred to herein as the “**Warrant Shares**”.

This opinion letter is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act.

As such counsel and for purposes of our opinion set forth below, we have examined and relied upon originals or copies, certified or otherwise identified to our satisfaction, of such documents, resolutions, certificates and other instruments of the Company and corporate records furnished to us by the Company, and have reviewed certificates of public officials, statutes, records and such other instruments and documents as we have deemed necessary or appropriate as a basis for the opinion set forth below, including, without limitation:

Paul Hastings LLP | 1117 S. California Avenue | Palo Alto, California 94304
t: +1.650.320.1800 | www.paulhastings.com

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NeuBase Therapeutics, Inc.
July 28, 2023
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- (i) the Registration Statement;
- (ii) the securities purchase agreement, dated as of June 28, 2023, by and between the Company and Armistice Capital Master Fund Ltd. (the “**Purchaser**”) in connection with a registered direct offering of securities (the “**RD Purchase Agreement**”);
- (iii) the securities purchase agreement, dated as of June 28, 2023, by and between the Company and the Purchaser in connection with a private placement of securities (the “**PIPE Private Placement Purchase Agreement**” and, together with the RD Purchase Agreement, the “**Purchase Agreements**”);
- (iv) the Engagement Letter;
- (v) the RD Series A Warrants;
- (vi) the RD Series B Warrants;
- (vii) the PIPE Series A Warrants;
- (viii) the PIPE Series B Warrants;
- (ix) the PIPE Pre-Funded Warrants;
- (x) the Placement Agent Warrants;
- (xi) the Amended and Restated Certificate of Incorporation of the Company, as amended from time to time, as presently in effect and as certified as of July 24, 2023 by the Office of the Secretary of State of the State of Delaware (the “**Certificate of Incorporation**”);

- (xii) the Amended and Restated Bylaws of the Company, as presently in effect, as certified by an officer of the Company as of the date hereof;
- (xiii) a certificate, dated as of July 24, 2023, from the Secretary of State of the State of Delaware certifying as to the existence and good standing of the Company under the laws of the State of Delaware (the “*Delaware Good Standing Certificate*”);
- (xiv) resolutions adopted by the Board of Directors of the Company in April 2022, certified by an officer of the Company, relating to, among other things, the formation and membership of the pricing committee of the Board of Directors (the “*Pricing Committee*”); and



NeuBase Therapeutics, Inc.
July 28, 2023
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- (xv) minutes of the meeting of the Pricing Committee held on June 27, 2023, certified by an officer of the Company, relating to, among other things, the approval of the Purchase Agreements and the issuance of the Warrants and the Warrant Shares.

In addition to the foregoing, we have made such investigations of law as we have deemed necessary or appropriate as a basis for the opinion set forth in this opinion letter.

In such examination and in rendering the opinion expressed below, we have assumed, without independent investigation or verification: (i) the genuineness of all signatures on all agreements, instruments, corporate records, certificates and other documents submitted to us; (ii) the authenticity and completeness of all agreements, instruments, corporate records, certificates and other documents submitted to us as originals; (iii) that all agreements, instruments, corporate records, certificates and other documents submitted to us as certified, electronic, facsimile, conformed, photostatic or other copies conform to originals thereof, and that such originals are authentic and complete; (iv) the legal competency, capacity and authority of all persons executing all agreements, instruments, corporate records, certificates and other documents submitted to us; (v) the due authorization, execution and delivery of all agreements, instruments, corporate records, certificates and other documents by all parties thereto (other than the Company); (vi) that no documents submitted to us have been amended or terminated orally or in writing except as has been disclosed to us in writing; (vii) that the statements contained in the certificates and comparable documents of public officials, officers and representatives of the Company and other persons on which we have relied for the purposes of this opinion letter are true and correct on and as of the date hereof; (viii) that there has not been and there will not be any change in the good standing status of the Company from that reported in the Good Standing Certificate; (ix) that each of the officers and directors of the Company has properly exercised his or her fiduciary duties and (x) that the Warrant Shares will not be issued or transferred in violation of any restriction contained in the Certificate of Incorporation and that upon issuance of any Warrant Shares, the total number of shares of Common Stock issued and outstanding will not exceed the total number of shares of Common Stock that the Company is then authorized to issue under the Certificate of Incorporation; (xi) that at or prior to the time of the issuance and delivery of any of the Warrant Shares, the Registration Statement will have been declared effective under the Securities Act and such effectiveness shall not have been terminated or rescinded; and (xii) that the exercise price of the Warrants will not be adjusted to an amount below the par value of the Common Stock. As to all questions of fact material to this opinion letter, and as to the materiality of any fact or other matter referred to herein, we have relied (without independent investigation or verification) upon representations and certificates or comparable documents of officers and representatives of the Company. With respect to the Warrants and the Warrant Shares, we express no opinion to the extent that, notwithstanding the Company's current reservation of shares of Common Stock, future issuances of securities of the Company, including the Warrant Shares and/or antidilution adjustments to outstanding securities of the Company, including the Warrants, may cause the Warrants to be exercisable for more shares of Common Stock than the number that then remain authorized but unissued.

Based upon the foregoing, and in reliance thereon, and subject to the assumptions, limitations, qualifications and exceptions set forth herein, we are of the opinion that the Warrant Shares have been duly authorized by all necessary corporate action on the part of the Company and, assuming a sufficient number of authorized but unissued shares of Common Stock are available for issuance when the Warrants are exercised, the Warrant Shares, when and if issued, delivered and paid for in accordance with the terms of the respective Warrants, will be validly issued, fully paid and nonassessable.



NeuBase Therapeutics,
Inc. July 28, 2023
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Without limiting any of the other limitations, exceptions, assumptions and qualifications stated elsewhere herein, we express no opinion with regard to the applicability or effect of the laws of any jurisdiction other than the General Corporation Law of the State of Delaware, as in effect on the date of this opinion letter. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

This opinion letter deals only with the specified legal issues expressly addressed herein, and you should not infer any opinion that is not explicitly stated herein from any matter addressed in this opinion letter.

This opinion letter is rendered solely in connection with the registration of the Warrant Shares for resale by the Selling Stockholders under the Registration Statement. This opinion letter is rendered as of the date hereof, and we assume no obligation to advise you or any other person with regard to any change after the date hereof in the circumstances or the law that may bear on the matters set forth herein after the effectiveness of the Registration Statement, even if the change may affect the legal analysis or a legal conclusion or other matters in this opinion letter.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to our firm in the Registration Statement under the heading “Legal Matters.” In giving such consent, we do not hereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules or regulations of the Commission thereunder.

Very truly yours,

/s/ Paul Hastings LLP

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of NeuBase Therapeutics, Inc. on Form S-1 of our report dated December 21, 2022, with respect to our audits of the consolidated financial statements of NeuBase Therapeutics, Inc. and subsidiaries as of September 30, 2022 and 2021 and for the years then ended appearing in the Annual Report on Form 10-K of NeuBase Therapeutics, Inc. and subsidiaries for the year ended September 30, 2022. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ Marcum llp

Marcum llp
New York, NY
July 27, 2023

Calculation of Filing Fee Tables

Form S-1
(Form Type)NeuBase Therapeutics, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price per Share ⁽²⁾	Maximum Aggregate Offering Price ⁽¹⁾	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid in Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to be Paid	Equity	Common Stock, par value \$0.0001 per share	Rule 457(c)	5,394,068	\$1.5650	\$8,441,716.42	\$110.20 per million	\$930.28	-	-	-	-
Fees Previously Paid	-	-	-	-	-	-	-	-	-	-	-	-
Carry Forward Securities												
Carry Forward Securities	-	-	-	-	-	-	-	-	-	-	-	-
	Total Offering Amounts					\$8,441,716.42		\$930.28				
	Total Fees Previously Paid							-				
	Total Fee Offsets							-				
	Net Fee Due							\$930.28				

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, or the Securities Act, this registration statement also covers any additional securities that may be offered, issued or become issuable in connection with any stock split, stock dividend or similar transaction or pursuant to anti-dilution provisions of any of the securities.
- (2) Estimated solely for the purpose of calculation of the registration fee pursuant to Rule 457(c) under the Securities Act based on a per share price of \$1.5650, the average of the high and low reported sales prices of the registrant's common stock on the Nasdaq Capital Market on July 25, 2023.