

PROSPECTUS



**Up to 2,000,575 Shares of Common Stock  
Offered by the Selling Stockholders**

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This prospectus relates to the resale from time to time of up to 2,000,575 shares of common stock, par value \$0.0001 per share, of Minerva Neurosciences, Inc. (the “Common Stock”) by the selling stockholders listed on page 9 (the “Selling Stockholders”), including their pledgees, assignees, donees, transferees or their respective successors-in-interest, which consist of 1,425,000 outstanding shares of our Common Stock held by the Selling Stockholders and 575,575 shares of our Common Stock issuable upon the exercise of outstanding pre-funded warrants to purchase shares of our Common Stock held by the Selling Stockholders. We will not receive any proceeds from the sale of the shares offered by this prospectus, except the exercise price of \$0.01 per share of any of the pre-funded warrants exercised for cash.

We have agreed, pursuant to a securities purchase agreement that we have entered into with the Selling Stockholders, to bear all of the expenses incurred in connection with the registration of these shares. The Selling Stockholders will pay or assume discounts, commissions, fees of underwriters, selling brokers or dealer managers and similar expenses, if any, incurred for the sale of these shares of our Common Stock.

The Selling Stockholders identified in this prospectus, or their pledgees, assignees, donees, transferees or their respective successors-in-interest, may offer the shares from time to time on terms to be determined at the time of sale through ordinary brokerage transactions or through any other means described in this prospectus under the caption “Plan of Distribution.” The shares may be sold at fixed prices, at prevailing market prices, at prices related to prevailing market prices or at negotiated prices. For a list of the Selling Stockholders, see the section entitled “Selling Stockholders” on page 9.

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

Our Common Stock is traded on The Nasdaq Capital Market under the symbol “NERV.” On August 3, 2023, the last reported sale price of our Common Stock was \$10.11 per share. You are urged to obtain current market quotations for our Common Stock.

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***Investing in our Common Stock involves a high degree of risk. You should carefully read and consider the section entitled “[Risk Factors](#)” on page 7 and the risk factors included in our periodic reports filed with the Securities and Exchange Commission, in any applicable prospectus supplement and in any other documents we file with the SEC.***

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**NEITHER THE SECURITIES AND EXCHANGE COMMISSION 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.**

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**The date of this prospectus is August 9, 2023.**

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## ABOUT THIS PROSPECTUS

We urge you to read carefully this prospectus, together with the information incorporated herein by reference as described under the heading “Where You Can Find More Information,” before buying any of the securities being offered.

You should rely only on the information contained or incorporated by reference in this prospectus and any applicable prospectus supplement or in any amendment to this prospectus. Neither we nor the Selling Stockholders have authorized anyone to provide you with different information, and if anyone provides, or has provided you, with different or inconsistent information, you should not rely on it. The Selling Stockholders may offer to sell, and may solicit offers to buy, shares of our Common Stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus, as well as the information filed previously with the Securities and Exchange Commission (the “SEC”), and incorporated herein by reference, is accurate only as of the date of the document containing the information, regardless of the time of delivery of this prospectus or any applicable prospectus supplement or any sale of our Common Stock.

A prospectus supplement may add to, update or change the information contained in this prospectus. You should read both this prospectus and any applicable prospectus supplement together with additional information described below under the heading “Where You Can Find More Information.”

In this prospectus, references to “Minerva Neurosciences,” “Minerva,” the “Company,” the “registrant,” “we,” “us,” and “our” refer to Minerva Neurosciences, Inc. and its subsidiaries. The phrase “this prospectus” refers to this prospectus and any applicable prospectus supplement, unless the context requires otherwise.

When we refer to the Selling Stockholders in this prospectus, we are referring to the persons names as the Selling Stockholders in this prospectus and, as applicable, any donees, pledgees, assignees, transferees or other successors-in-interest selling the shares received after the date of this prospectus from the Selling Stockholders as a gift, pledge, or other non-sale related transfer.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement and the information incorporated by reference in this prospectus and any prospectus supplement contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995, as amended, that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including, but not limited to, statements regarding the clinical development of roluperidone for the treatment of negative symptoms of schizophrenia; the potential benefits of roluperidone for the treatment of negative symptoms of schizophrenia or any other indication; the adequacy and efficacy of our clinical trials and studies with roluperidone, and the sufficiency of the data from such trials and studies to support marketing application; our interpretation of the feedback from the U.S. Food and Drug Administration (the “FDA”); the timing and outcomes of future interactions with U.S. and foreign regulatory bodies, including the FDA; our expectations regarding the potential market size and size of the potential patient populations for roluperidone, if approved; the timing and likelihood of success, plans and objectives of management for future operations; and our expected future financing needs. 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.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar expressions. The forward-looking statements in this prospectus are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this prospectus or the documents incorporated by reference in this prospectus, as applicable, and are subject to a number of risks, uncertainties and assumptions described under the sections in this prospectus and the documents incorporated by reference herein entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this prospectus and the documents incorporated by reference herein. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by applicable law, we undertake no obligation to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See the section titled “Where You Can Find More Information.”

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this prospectus, and while we believe such information provides a reasonable basis for these statements, such information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and you are cautioned not to unduly rely on these statements.

## PROSPECTUS SUMMARY

*The following summary highlights selected information contained or incorporated by reference elsewhere in this prospectus and does not contain all of the information that you need to consider in making your investment decision. Before investing in our securities, you should carefully read this entire prospectus, any applicable prospectus supplement and any related free writing prospectus, including the information under the caption “Risk Factors” contained in this prospectus (as supplemented and amended) and under similar headings in the documents that are incorporated by reference into this prospectus. You should also carefully read the other information incorporated by reference into this prospectus, including our financial statements and the related notes, and the exhibits to the registration statement of which this prospectus is a part.*

### Company Overview

We are a clinical-stage biopharmaceutical company focused on the development and commercialization of proprietary product candidates to treat patients suffering from central nervous system diseases. Leveraging our scientific insights and clinical experience, we have acquired or in-licensed compounds that we believe have innovative mechanisms of actions and therapeutic profiles that potentially address the unmet needs of patients with these diseases.

Our primary product candidate, roluperidone (f/k/a MIN-101), is being developed for the treatment of negative symptoms in patients with schizophrenia. Roluperidone is a compound that has been shown to block serotonin, sigma, and  $\alpha$ -adrenergic receptors that are involved in the regulation of mood, cognition, sleep and anxiety. It has been designed to block a specific subtype of serotonin receptor called 5-HT<sub>2A</sub>. When 5-HT<sub>2A</sub> is blocked, certain symptoms of schizophrenia, such as hallucinations, delusions, agitation and thought and movement disorders, as well as the side effects associated with antipsychotic treatments, can be minimized. Additionally, blocking 5-HT<sub>2A</sub> promotes slow wave sleep, a sleep stage often disrupted in patients with schizophrenia. Roluperidone has also been designed to block a specific subtype of sigma receptor called sigma<sub>2</sub>, which is involved in movement control, psychotic symptom control and learning and memory. Blocking sigma<sub>2</sub>, along with blocking the  $\alpha$ -adrenergic subtypes  $\alpha$ 1A, and to a lesser extent  $\alpha$ 1B, also increases calcium levels in neurons in the brain, which can improve memory. Pre-clinical findings provide evidence of the effect of roluperidone on Brain-Derived Neurotrophic Factor, which has been associated with neurogenesis, neuroplasticity, neuroprotection, synapse regulation, learning and memory.

We believe the scientifically supported and innovative mechanisms of action of roluperidone may potentially address the unmet needs of schizophrenic patients, which include treatment of negative symptoms and cognitive impairment, without the side effects of existing therapies. Negative symptoms are lifelong debilitating symptoms and include: asociality, or the lack of motivation to engage in social interactions; anhedonia, or the inability to experience positive emotions; alogia, or failure to engage in normal conversation; avolition, or loss of energy and interest in activities; and blunted affect, or diminished emotional expression. We believe that roluperidone, if approved, could treat the majority of patients diagnosed with schizophrenia. An estimated 69% of patients diagnosed with schizophrenia have negative symptoms, with at least 42% of patients diagnosed with schizophrenia having prominent negative symptoms.

In August 2022, we submitted a New Drug Application (“NDA”) with the U.S. Food and Drug Administration (“FDA”) for our lead product candidate, roluperidone, for the treatment of negative symptoms in schizophrenia. The FDA initially notified us that they would not accept the file for review, issuing a refusal to file letter (“RTF”) in October 2022. Subsequently, we requested a formal dispute resolution and appealed the RTF, following which, on April 27, 2023, the FDA filed our NDA for roluperidone. In May 2023, the FDA confirmed that the NDA for roluperidone was assigned a standard review classification and a Prescription Drug User Fee Act goal date of February 26, 2024. The FDA advised that it identified potential review issues that had been previously cited in the RTF decision letter, which included those discussed at the Type C meeting in March 2022.

In addition, we have exclusive rights to develop and commercialize MIN-301, a compound for the treatment of Parkinson's disease. We previously co-developed seltorexant (f/k/a MIN-202 or JNJ-42847922) with Janssen Pharmaceutica NV, one of the Janssen Pharmaceutical Companies of Johnson & Johnson ("Janssen"), for the treatment of insomnia disorder and adjunctive treatment of Major Depressive Disorder. In June 2020, we exercised our right to opt out of our agreement with Janssen for the future Phase 3 development and commercialization of seltorexant. Under the terms of the opt-out agreement, we were entitled to collect royalties in the mid-single digits on potential future worldwide sales of seltorexant in certain indications, with no further financial obligations to Janssen. In January 2021, we sold our rights to these potential royalties to Royalty Pharma plc for a \$60 million cash payment and up to an additional \$95 million in potential milestone payments, subject to completion of Phase 3 trials by Janssen and regulatory approvals. Janssen is currently conducting two Phase 3 studies with seltorexant, a third Phase 3 study was discontinued during 2022.

#### **Private Placement**

On June 27, 2023, we entered into a Securities Purchase Agreement (the "Purchase Agreement") with the purchasers named therein (the "Purchasers"), pursuant to which we agreed to sell and issue to the Purchasers in a private placement (the "Private Placement") (i) an aggregate of 1,425,000 shares of Common Stock, at a purchase price of \$10.00 per share, and (ii) in lieu of additional shares of Common Stock, pre-funded warrants (the "Pre-Funded Warrants") to purchase an aggregate of 575,575 shares of Common Stock at a purchase price of \$9.99 per Pre-Funded Warrant. On June 30, 2023, we closed the Private Placement and issued an aggregate of 1,425,000 shares of Common Stock and Pre-Funded Warrants to purchase an aggregate of 575,575 shares of Common Stock.

Each Pre-Funded Warrant has an exercise price equal to \$0.01 per share. The Pre-Funded Warrants are exercisable at any time after their original issuance and will not expire until exercised in full. The Pre-Funded Warrants provide that a holder of Pre-Funded Warrants will not have the right to exercise any portion of its Pre-Funded Warrants if such holder, together with its affiliates, would beneficially own in excess of 14.99% or 19.99%, as applicable, of the number of shares of Common Stock outstanding immediately after giving effect to such exercise (the "Beneficial Ownership Limitation"); *provided, however*, that each holder may increase or decrease the Beneficial Ownership Limitation by giving 61 days' notice to us, but not to any percentage below 4.99% or in excess of 19.99%.

The shares of Common Stock issued to the Purchasers, and the shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants, were not initially registered under the Securities Act or any state securities laws. The Private Placement relied on the exemption from the registration requirements afforded by Regulation D under the Securities Act. In connection with their execution of the Purchase Agreement, each of the Purchasers represented to us that such Purchaser is an "accredited investor" as defined in Regulation D of the Securities Act and that the securities purchased by such Purchaser were being acquired solely for its own account and for investment purposes and not with a view to its future sale or distribution.

Under the terms of the Purchase Agreement, we agreed to prepare and file, within 45 days after the closing of the Private Placement, a registration statement with the SEC to register for resale the shares of our Common Stock issued under the Purchase Agreement and the shares of our Common Stock issuable upon exercise of the Pre-Funded Warrants issued under the Purchase Agreement.

#### **Corporate Information**

We were incorporated under the name Cyrenaic Pharmaceuticals, Inc. under the laws of the State of Delaware on April 23, 2007. In November 2013, we merged with Sonkei Pharmaceuticals, Inc. and the combined company was renamed Minerva Neurosciences, Inc.

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Our principal executive offices are located at 1500 District Avenue Burlington, Massachusetts 01803 and our phone number is (617) 600-7373. Our website address is [www.minervaneurosciences.com](http://www.minervaneurosciences.com). Our website and the information contained on, or that can be accessed through, our website will not be deemed to be incorporated by reference in, and are not considered part of, this prospectus.

**THE OFFERING**

Common Stock Offered by the Selling Stockholders	Up to 2,000,575 shares
Use of Proceeds	We will not receive any proceeds from the sale of the Common Stock covered by this prospectus, except with respect to amounts received by us due to the exercise of Pre-Funded Warrants.
Nasdaq Capital Market Symbol	NERV



## **RISK FACTORS**

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risks described in the documents incorporated by reference in this prospectus and any applicable prospectus supplement and any related free writing prospectus, as well as other information we include or incorporate by reference into this prospectus and any applicable prospectus supplement. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to the occurrence of any of these risks, and you may lose all or part of your investment. This prospectus and the documents incorporated herein by reference also contain forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described under the heading “Risk Factors” in the documents incorporated herein by reference, including in (1) our most recent Annual Report on Form 10-K on file with the SEC, (2) our most recent Quarterly Report on Form 10-Q on file with the SEC and (3) any amendments thereto reflected in subsequent filings with the SEC, all of which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus, the documents incorporated by reference and any free writing prospectus that we may authorize for use in connection with a specific offering.

## USE OF PROCEEDS

We are filing the registration statement of which this prospectus forms a part to permit the holders of the shares of our Common Stock described in the section entitled “Selling Stockholders” to resell such shares. We are not selling any securities under this prospectus, and we will not receive any proceeds from the sale or other disposition of shares of our Common Stock held by the Selling Stockholders, except with respect to amounts received by us due to the exercise of the Pre-Funded Warrants.

Each Selling Stockholder will pay any underwriting discounts and commissions and expenses incurred by such Selling Stockholder for brokerage, accounting, tax or legal services or any other expenses incurred by such Selling Stockholder in disposing of its shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, Nasdaq Stock Market listing fees and fees and expenses of our counsel and our accountants.

## SELLING STOCKHOLDERS

This prospectus covers the sale or other disposition by the Selling Stockholders of up to the total number of shares of our Common Stock that were issued to the Selling Stockholders pursuant to the Purchase Agreement, plus the total number of shares of our Common Stock issuable upon exercise of the Pre-Funded Warrants issued to the Selling Stockholders pursuant to the Purchase Agreement, without giving effect to the Beneficial Ownership Limitation described under “Prospectus Summary—Private Placement—Securities Purchase Agreement.” The table below sets forth, to our knowledge, information concerning the beneficial ownership of shares of our Common Stock by the Selling Stockholders as of July 21, 2023. The information in the table below with respect to each Selling Stockholder has been obtained from the respective Selling Stockholder and the Selling Stockholders may have sold, transferred or otherwise disposed of all or a portion of their securities after the date on which they provided us with information regarding their securities. Throughout this prospectus, when we refer to the shares of our Common Stock being registered on behalf of the Selling Stockholders, we are referring to the shares of our Common Stock and the shares underlying the Pre-Funded Warrants issued to the Selling Stockholders pursuant to the Purchase Agreement, without giving effect to the Beneficial Ownership Limitation described above. The Selling Stockholders may sell all, some or none of the shares of Common Stock subject to this prospectus. See “Plan of Distribution” below as it may be supplemented and amended from time to time.

The number of shares of Common Stock beneficially owned prior to the offering for each Selling Stockholder includes all shares of our Common Stock beneficially held by such Selling Stockholder as of July 21, 2023, which includes (i) all shares of our Common Stock purchased by such Selling Stockholder in the Private Placement and (ii) all shares of Common Stock issuable upon exercise of the Pre-Funded Warrants purchased by such Selling Stockholder in the Private Placement, subject to the Beneficial Ownership Limitation described under “Prospectus Summary—Private Placement—Securities Purchase Agreement.”

Other than as stated above, beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to our Common Stock. Generally, a person “beneficially owns” shares of our Common Stock if the person has or shares with others the right to vote those shares or to dispose of them, or if the person has the right to acquire voting or disposition rights within 60 days. In computing the number of shares of our Common Stock beneficially owned by a Selling Stockholder and the percentage ownership of such Selling Stockholder, we deemed outstanding shares of Common Stock issuable upon the exercise of pre-funded warrants (regardless of whether or not such pre-funded warrants were acquired in the Private Placement) and/or warrants, as applicable, held by that Selling Stockholder that are exercisable within 60 days of July 21, 2023. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other Selling Stockholder. The percentages of shares owned before and after the offering are based on 6,993,406 shares of Common Stock outstanding as of July 21, 2023, which includes the outstanding shares of Common Stock offered by this prospectus but does not include any shares of Common Stock offered by this prospectus that are issuable pursuant to the Pre-Funded Warrants and are deemed outstanding in the table below because they are beneficially owned by a Selling Stockholder. The inclusion of any shares in this table does not constitute an admission of beneficial ownership for any Selling Stockholder named below.

Name of Selling Stockholder	Shares of Common Stock Beneficially Owned Prior to Offering		Number of Shares of Common Stock Being Offered <sup>(1)</sup>	Shares of Common Stock to be Beneficially Owned After Offering <sup>(2)</sup>	
	Number	Percentage		Number	Percentage
Funds affiliated with Federated Hermes, Inc. <sup>(3)</sup>	1,351,275	19.3%	500,350	1,201,275	16.4%
Boehringer Ingelheim International GmbH <sup>(4)</sup>	1,428,708	19.99%	1,500,225	—	—

(1) The number of shares of our Common Stock in the column “Number of Shares of Common Stock Being Offered” represents all of the shares of our Common Stock that a Selling Stockholder may offer and sell from time to time under this prospectus.

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- (2) We do not know when or in what amounts a Selling Stockholder may offer shares for sale. The Selling Stockholders might not sell any or might sell all of the shares offered by this prospectus. Because the Selling Stockholders may offer all or some of the shares pursuant to this offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares, we cannot estimate the number of the shares that will be held by the Selling Stockholders after completion of the offering. However, for purposes of this table, we have assumed no further acquisitions of shares of Common Stock (or securities exercisable or convertible into Common Stock) by the Selling Stockholders and that, after completion of the offering, none of the shares covered by this prospectus will be held by the Selling Stockholders, including Common Stock issuable upon exercise of the Pre-Funded Warrants issued in the Private Placement.
- (3) The shares reported under “Shares of Common Stock Beneficially Owned Prior to the Offering” consist of (i) 70,950, 75,000 and 4,050 shares of Common Stock purchased by Federated Hermes Kaufmann Small Cap Fund, a portfolio of Federated Hermes Equity Funds (“Federated Hermes Kaufmann Small Cap Fund”), Federated Hermes Kaufmann Fund, a portfolio of Federated Hermes Equity Funds (“Federated Hermes Kaufmann Fund”) and Federated Hermes Kaufmann Fund II, a portfolio of Federated Hermes Insurance Series (“Federated Hermes Kaufmann Fund II” and together with Federated Hermes Kaufmann Small Cap Fund and Federated Hermes Kaufmann Fund, the “Federated Hermes Kaufmann Funds”), respectively, in the Private Placement, (ii) 534,050 additional shares of Common Stock previously purchased by Federated Hermes Kaufmann Small Cap Fund, (iii) 650,000 additional shares of Common Stock previously purchased by Federated Hermes Kaufmann Fund, and (iv) 17,225 additional shares of Common Stock previously purchased by Federated Hermes Kaufmann Fund II. In addition to the foregoing shares, as of July 21, 2023, Federated Hermes Kaufmann Small Cap Fund, Federated Hermes Kaufmann Fund and Federated Hermes Kaufmann Fund II held pre-funded warrants purchased in the Private Placement to purchase an aggregate of 350,350 shares of Common Stock, which are not included in the shares reported under “Shares of Common Stock Beneficially Owned Prior to the Offering” because they are subject to limitations on exercisability if such exercise would result in Federated Hermes Kaufmann Funds, in the aggregate, beneficially owning more than 14.99% of our outstanding Common Stock. The shares reported under “Number of Shares of Common Stock Being Offered” consist of the shares of Common Stock, including the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants, purchased by Federated Hermes Kaufmann Funds in the Private Placement, without giving effect to the Beneficial Ownership Limitation. The shares reported under “Number of Shares of Common Stock to be Beneficially Owned After Offering” consist of (i) 534,050 shares of Common Stock held by Federated Hermes Kaufmann Small Cap Fund, (ii) 650,000 shares of Common Stock held by Federated Hermes Kaufmann Fund and (iii) 17,225 shares of Common Stock held by Federated Hermes Kaufmann Fund II. The Federated Hermes Kaufmann Funds are managed by Federated Equity Management Company of Pennsylvania and subadvised by Federated Global Investment Management Corp., which are wholly-owned subsidiaries of FII Holdings, Inc., which is a wholly-owned subsidiary of Federated Hermes, Inc. (the “Federated Hermes Parent”). All of the Federated Hermes Parent’s outstanding voting stock is held in the Voting Shares Irrevocable Trust (the “Federated Trust”) for which Thomas R. Donahue, Ann C. Donahue and J. Christopher Donahue, who are collectively referred to as Federated Trustees, act as trustees. The Federated Hermes Parent’s subsidiaries have the power to direct the vote and disposition of the securities held by the Federated Hermes Kaufmann Funds. The business address of each Federated Trustee is 4000 Ericsson Drive, Warrendale, PA 15086-7561.
- (4) The shares reported under “Shares of Common Stock Beneficially Owned Prior to the Offering” consist of (i) 1,275,000 shares of Common Stock purchased in the Private Placement and (ii) 153,708 shares of Common Stock issuable upon exercise of the Pre-Funded Warrants purchased in the Private Placement. The shares underlying the following Pre-Funded Warrants purchased in the Private Placement are not included in the shares reported under “Shares of Common Stock Beneficially Owned Prior to the Offering” because they are subject to limitations on exercisability if such exercise would result in Boehringer Ingelheim International GmbH beneficially owning more than 19.99% of our outstanding Common Stock: 71,517 shares of Common Stock issuable upon exercise of the Pre-Funded Warrants purchased in the Private Placement. The shares reported under “Number of Shares of Common Stock Being Offered” consist of the shares of Common Stock, including the shares of Common Stock issuable upon exercise of the

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Pre-Funded Warrants, purchased by Boehringer Ingelheim International GmbH in the Private Placement, without giving effect to the Beneficial Ownership Limitation. Boehringer Ingelheim International GmbH is an indirect wholly owned subsidiary of C. H. Boehringer Sohn AG & Co. KG, the General Partner of which is Boehringer AG (the “GP”). The GP and Boehringer Ingelheim International GmbH may each be deemed to have shared voting and dispositive power over all of the securities. The address of Boehringer Ingelheim International GmbH is Binger Straße 173, 55216 Ingelheim am Rhein Germany.

### **Relationships with Selling Stockholders**

As discussed in greater detail above under the section titled “*Prospectus Summary—Private Placement*,” in June 2023, we entered into the Purchase Agreement with the Selling Stockholders, pursuant to which we sold and issued shares of our Common Stock and Pre-Funded Warrants to purchase shares of our Common Stock and agreed to file a registration statement with the SEC to cover the resale by the Selling Stockholders of the shares of our Common Stock, including the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants, issued pursuant to the Purchase Agreement.

None of the Selling Stockholders has had a material relationship with us or any of our predecessors or affiliates within the past three years, other than as a result of the ownership of our shares of Common Stock or other securities.

None of the Selling Stockholders has held any position or office with us or our affiliates within the last three years. However, pursuant to the Purchase Agreement, in connection with the Private Placement, Boehringer Ingelheim International GmbH has the right to designate an observer to attend, subject to certain exceptions, meetings of our board of directors and its committees, until the earlier of (i) the occurrence of a change of control and (ii) the date that it and its affiliates collectively hold less than 10% of shares of our Common Stock (including shares of our Common Stock held by such parties and shares of our Common Stock issuable upon exercise of any portion of the Pre-Funded Warrant issued to such parties and not yet exercised).

## PLAN OF DISTRIBUTION

The Selling Stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of Common Stock or interests in shares of Common Stock received after the date of this prospectus from the Selling Stockholders as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of Common Stock or interests in shares of Common Stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The Selling Stockholders may use any one or more of the following methods when disposing of shares or interests therein:

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

The Selling Stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of Common Stock owned by the Selling Stockholders and, if the Selling Stockholders default in the performance of its secured obligations, the pledgees or secured parties may offer and sell the shares of Common Stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending the Selling Stockholders list to include the pledgee, transferee or other successors in interest as Selling Stockholders under this prospectus. The Selling Stockholders also may transfer the shares of Common Stock in other circumstances, in which case the transferees, pledgees, donees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our Common Stock 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 Common Stock in the course of hedging the positions they assume. The Selling Stockholders may also sell shares of our Common Stock short and deliver these securities to close out their short positions, or loan or pledge the Common Stock 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 the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

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The aggregate proceeds to the Selling Stockholders from the sale of the Common Stock offered by the Selling Stockholders will be the purchase price of the Common Stock less discounts or commissions, if any. The Selling Stockholders reserve the right to accept and, together with their respective agents from time to time, to reject, in whole or in part, any proposed purchase of Common Stock to be made directly or through agents. We will not receive any of the proceeds from an offering of securities under this prospectus. Upon any exercise of the Pre-Funded Warrants by payment of cash, however, we will receive the exercise price of \$0.01 per share pursuant to the terms of the Pre-Funded Warrants.

A Selling Stockholder also may resell all or a portion of its shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that such Selling Stockholder meets the criteria and conforms to the requirements of that rule.

To the extent required, the shares of our Common Stock to be sold, the name of the Selling Stockholders, the respective purchase price and public offering price, the names of any agents or dealers, and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

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

We have advised the Selling Stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the Selling Stockholders and their respective affiliates. In addition, to the extent applicable, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the Selling Stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The Selling Stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the Selling Stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the Selling Stockholders to use commercially reasonable efforts to cause the registration statement of which this prospectus constitutes a part to become effective and to remain continuously effective until the earlier of (i) the third anniversary of the effective date of this prospectus, (ii) the date all of the shares covered by this prospectus may be sold under Rule 144 of the Securities Act without being subject to any volume, manner of sale or publicly available information requirements or (iii) immediately prior to the closing of a sale, conveyance or other disposition of all or substantially all of the property or business of us (other than to a wholly-owned subsidiary of us), or a merger of consolidation with or into any other corporation or other business transaction or series of transactions as a result of which our stockholders immediately prior to the transaction would hold less than a majority of the voting interests of us (or successor or parent company thereof) after the transaction; provided that such transaction shall not include any transaction or series of related transaction principally for bona fide equity financing purposes.

## LEGAL MATTERS

The validity of the shares of Common Stock to be offered for resale by the Selling Stockholders under this prospectus will be passed upon for us by Cooley LLP, Boston, Massachusetts.

## EXPERTS

The financial statements of Minerva Neurosciences, Inc. as of December 31, 2022 and 2021, and for each of the two years in the period ended December 31, 2022, incorporated by reference in this prospectus by reference to Minerva Neurosciences, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm, given upon their authority as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement that we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our consolidated subsidiaries and our securities. 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. You can obtain a copy of the registration statement from the SEC's website.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>.

We make available, free of charge, through our investor relations website, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, statements of changes in beneficial ownership of securities and amendments to those reports and statements as soon as reasonably practicable after they are filed with the SEC. The address for our website is [www.minervaneurosciences.com](http://www.minervaneurosciences.com). Information contained in or accessible through our website does not constitute a part of this prospectus and is not incorporated by reference in this prospectus.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We also incorporate by reference into this prospectus the documents listed below and any future filings made by us with the SEC (other than Current Reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items and other portions of documents that are furnished, but not filed, pursuant to applicable rules promulgated by the SEC) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including all such reports and documents filed with the SEC after the date of the initial filing of the registration statement of which this prospectus forms a part but prior to the effectiveness of such registration statement:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2022, filed with the SEC on March 8, 2023, (as amended by [Amendment No.1 to our 2022 Annual Report on Form 10-K](#) filed with the SEC on April 20, 2023);



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- Our Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2023 and June 30, 2023, filed with the SEC on [May 15, 2023](#) and [August 1, 2023](#), respectively;
- Our Current Reports on Form 8-K filed with the SEC on [May 1, 2023](#), [May 5, 2023](#), [June 2, 2023](#), [June 20, 2023](#) and [June 28, 2023](#) (in each case, except for information contained therein which is furnished rather than filed); and
- The description of our Common Stock in our registration statement on [Form 8-A](#) filed with the SEC on June 23, 2014, including any amendments or reports filed for the purpose of updating such description, including [Exhibit 4.2](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits which are specifically incorporated by reference into such documents. You should direct any requests for documents by writing us at 1500 District Avenue Burlington, MA 01803, or by telephoning us at (617) 600-7373.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

**Up to 2,000,575 Shares**

**Common Stock**



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**PROSPECTUS**

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**August 9, 2023**

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