

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

**FORM 10-K/A  
(Amendment No. 1)**

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2022

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE  
TRANSITION PERIOD FROM TO

Commission File Number 001-36517

**Minerva Neurosciences, Inc.**

(Exact name of Registrant as specified in its Charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

26-0784194  
(I.R.S. Employer  
Identification No.)

1500 District Avenue  
Burlington, MA  
(Address of principal executive offices)

01803  
(Zip Code)

Registrant's telephone number, including area code: (617) 600-7373

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	NERV	The Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES  NO

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES  NO

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or Section 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES  NO

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). YES  NO

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  Accelerated filer

Non-accelerated filer  Smaller reporting company

Emerging growth company

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 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES  NO

The aggregate value of the Company's Common Stock held by non-affiliates of the Company was approximately \$17.1 million as of June 30, 2022, when the last reported sales price was \$3.31 per share.

The number of shares of Registrant's Common Stock outstanding as of April 17, 2023 was 5,340,193.

**DOCUMENTS INCORPORATED BY REFERENCE**

None.

Auditor Firm PCAOB ID: 34

Auditor Name: Deloitte & Touche, LLP

Auditor Location: Boston, Massachusetts

## EXPLANATORY NOTE

Minerva Neurosciences, Inc. (the “Company,” “Minerva,” “we,” “us” or “our”) is filing this Amendment No. 1 on Form 10-K/A (this “Amendment”) to amend our Annual Report on Form 10-K for the year ended December 31, 2022, originally filed with the Securities and Exchange Commission (the “SEC”) on March 8, 2023 (the “Original 10-K”), to (i) include the information required by Items 10 through 14 of Part III of Form 10-K and (ii) amend Item 15 of Part IV of the Original 10-K to update the exhibit list. The information required by Items 10 through 14 of Part III of Form 10-K was previously omitted from the Original 10-K in reliance on General Instruction G(3) to Form 10-K, which permits the information in the above referenced items to be incorporated in the Form 10-K by reference from our definitive proxy statement if such statement is filed no later than 120 days after our fiscal year-end. We are filing this Amendment to include Part III information in our Form 10-K because a definitive proxy statement containing such information may not be filed by Minerva within 120 days after the end of the fiscal year covered by the Form 10-K.

In accordance with Rule 12b-15 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), Part III, Items 10 through 14 of the Original 10-K are hereby amended and restated in their entirety. Additionally, in accordance with Rules 12b-15 and 13a-14 under the Exchange Act, we have amended Part IV, Item 15 to include currently dated certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. Since no new financial statements have been included in this Amendment and this Amendment does not contain or amend any disclosure with respect to Items 307 and 308 of Regulation S-K, paragraphs 3, 4, and 5 of the certifications have been omitted. Similarly, since no financial statements have been included in this Amendment, certifications pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 have been omitted.

Except for the changes to Part III and Item 15 of Part IV, including the filing of related certifications added to the exhibit list in Part IV, this Amendment makes no changes to the Original 10-K. This Amendment does not reflect events occurring after the filing of the Original 10-K or modify disclosures affected by subsequent events. Terms used but not otherwise defined in this Amendment have such meaning as ascribed to them in the Original 10-K.

As disclosed in the Original 10-K, on June 17, 2022, 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 one-for-eight (1-for-8) reverse stock split of our outstanding common stock (the “Reverse Stock Split”). All historical share and per share amounts reflected in this Amendment have been adjusted to reflect the Reverse Stock Split. The par value of our common stock was not adjusted as a result of the Reverse Stock Split.

MINERVA NEUROSCIENCES, INC.

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**ITEM 10. Directors, Executive Officers and Corporate Governance****Information About Our Directors and Executive Officers.*****Board of Directors***

The table below sets forth our executive officers and directors as of April 17, 2023. We have also included below a summary of the business experience of each of our directors, including a discussion of the qualifications, attributes and skills that led our Board of Directors (the “Board”) to the conclusion that each of our directors should serve as a director of Minerva.

<u>Name</u>	<u>Age</u>	<u>Term Expires</u>	<u>Position</u>
Dr. Remy Luthringer	62	2025	Chief Executive Officer and Executive Chairman of the Board of Directors
William F. Doyle(1)(2)	60	2024	Director
Hans Peter Hasler(2)(3)	67	2024	Director
Jeryl Hilleman(1)	65	2025	Director
Dr. David Kupfer(3)	82	2023	Director
Dr. Fouzia Laghrissi-Thode(2)	60	2025	Director
Jan van Heek(1)	73	2023	Director

(1) Member of the Audit Committee. Ms. Hilleman serves as Chair of the Audit Committee.

(2) Member of the Compensation Committee. Mr. Doyle serves as Chair of the Compensation Committee.

(3) Member of the Nominating and Corporate Governance Committee. Dr. Kupfer serves as Chair of the Nominating and Corporate Governance Committee.

***Dr. Remy Luthringer*** has provided services to us since July 2010, first as a consultant and then as an employee beginning in May 2014. Dr. Luthringer was named our President and Chief Executive Officer in November 2014, and served as President until December 2017. He has served on our Board since November 2014. Dr. Luthringer previously served as an advisor to Medicxi Ventures, formerly Index Ventures Life Sciences, and before that served as an advisor to Index Ventures and as Chief Medical Officer to Index Life VI, a biotechnology fund raised by Index Ventures. Dr. Luthringer also serves on the board of directors of a number of private companies. He received his Ph.D. in Pharmacology and Neurosciences from University Louis Pasteur (France). Our Board believes that Dr. Luthringer should serve on our Board due to his extensive knowledge of our business as well as his corporate vision and operational knowledge, which provide strategic guidance to our Board.

***William F. Doyle*** has served on our Board since December 2017. Mr. Doyle is Executive Chairman of Novocure Ltd., a commercial-stage Nasdaq-listed oncology company, where he has served as Chairman of the Board since 2009 and a director since 2004. Since 2021, Mr. Doyle has served on the board of Elanco, Inc. a New York Stock Exchange-listed animal health company. From 2004 to 2021, Mr. Doyle served as a director of OptiNose, Inc., a Nasdaq-listed specialty pharmaceutical company. From 2015 to 2017, he served on the board of directors of Zoetis Inc., a New York Stock Exchange-listed animal health company. Previously, he was a member of Johnson & Johnson’s Medical Devices and Diagnostics Group Operating Committee and Vice President, Licensing and Acquisitions. While at Johnson & Johnson, Mr. Doyle was also Chairman of the Medical Devices Research and Development Council, Worldwide President of Biosense-Webster, Inc., and a member of the boards of Cordis Corporation and Johnson & Johnson Development Corporation, Johnson & Johnson’s venture capital subsidiary. Earlier he was a management consultant at McKinsey & Company. Mr. Doyle holds an S.B. in materials science and engineering from the Massachusetts Institute of Technology and an M.B.A. from Harvard Business School. Our Board believes Mr. Doyle’s experience serving in executive officer positions, service on multiple boards of directors, and extensive knowledge of the industry qualifies him to serve as a member of our Board.

**Hans Peter Hasler** has served on our Board since December 2017. Until 2020, Mr. Hasler served as the Chief Executive Officer of Vicarius Pharma AG, a privately held company that provided strategic options to non-European bio-pharma companies bringing late-stage assets to the European market. He is also Senior Advisor at SBTech Global Advisory. His prior experience includes Elan Corporation, where he was Chief Operating Officer, and Biogen, Inc., where his positions included Chief Operating Officer, Executive Vice President, Head of Global Neurology and International. Previously, Mr. Hasler was at Wyeth Pharmaceuticals as Senior Vice President, Chief Marketing Officer and Managing Director of Wyeth Group Germany and General Manager, Wyeth-Lederle Switzerland, Austria and ECE. Mr. Hasler has served as Chairman of the Board of HBM Healthcare Investments AG, a SIX Swiss Exchange listed company, since 2009. Mr. Hasler has served as the Chairman of Shield Therapeutics, an AIM-listed specialty-pharma company, since September 2018, and as a Director of Gain Therapeutics, a Nasdaq-listed biotechnology company, since March 2021. Mr. Hasler holds a Federal Swiss Commercial Diploma and a Marketing Manager Certificate from the Swiss Institute of Business Economy SIB, Zurich, Switzerland. Our Board believes Mr. Hasler's experience helping bring late-stage assets to market, as well as his overall experience in the biotech industry in positions of leadership qualifies him to serve as a member of our Board.

**Jeryl Hilleman** has served on our Board since July 2018. Ms. Hilleman brings extensive experience in life sciences and served as a public company Chief Financial Officer for close to 20 years. Most recently, from June 2014 to November 2019, Ms. Hilleman served as the Chief Financial Officer of Intersect ENT, Inc., a commercial drug delivery company focusing on patients with ear, nose and throat conditions. Prior to Intersect ENT, Ms. Hilleman served as Chief Financial Officer of other public healthcare companies including Ocera Therapeutics, Inc. (subsequently acquired by Mallinckrodt plc), a biopharmaceutical company, Amyris, Inc., a renewable products company, and Symyx Technologies (subsequently acquired by Accelrys, Inc.), a life sciences automation company. Since July 2018, Ms. Hilleman has served as a member of the board of directors and chair of the audit committee of Novocure Ltd. Since December 2019, Ms. Hilleman has served as a member of the board of directors of SI-Bone and, since April 2021, as a member of the board of directors of HilleVax, Inc., which went public in May 2022. Previously, Ms. Hilleman served as a member of the board of directors and chair of the audit committee of Xenoport, Inc., a publicly-held biopharmaceutical company, from 2005 until it was acquired in 2016, and of Talis Biomedical from February 2021 until June 2022. Ms. Hilleman received a B.A. in History from Brown University and an M.B.A. from the Wharton School at the University of Pennsylvania. Our Board believes that Ms. Hilleman's extensive experience in the pharmaceutical industry and as a chief financial officer qualifies her to serve on our Board.

**Dr. David Kupfer** has served on our Board since November 2015. Dr. Kupfer is Distinguished Professor Emeritus of Psychiatry at the University of Pittsburgh School of Medicine, where he chaired that department for 26 years. He also chaired the American Psychiatric Association Task Force for the development of the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders ("DSM-5"), which defines the criteria for the diagnosis and classification of mental disorders. Dr. Kupfer received his M.D. from Yale University in 1965. Our Board believes that Dr. Kupfer's extensive experience in the field of psychiatry qualifies him to serve on our Board.

**Dr. Fouzia Laghrissi-Thode** has served on our Board since May 2015. Dr. Laghrissi-Thode has held positions of leadership at AstraZeneca, Roche, Novartis and Sandoz in a broad range of therapeutic areas, including central nervous system, cardiovascular, metabolic disease and genito-urinary health. Since April 2018, Dr. Laghrissi-Thode has served as Chief Executive Officer and a member of the board of directors of DalCor Pharmaceuticals. Prior to joining DalCor, Dr. Laghrissi-Thode served as U.S. Vice President for the renal-cardio therapy area at AstraZeneca, Head of the South San Francisco site, and the chief executive officer of ZS Pharma, Inc. She was formerly vice president of the global cardiovascular and metabolism therapy area at AstraZeneca. Dr. Laghrissi-Thode holds an M.D. from the University of Tours School of Medicine in France, is board certified in psychiatry and was an adjunct professor of psychiatry at the University of Pittsburgh. Our Board believes that Dr. Laghrissi-Thode's extensive experience in the pharmaceutical industry and field of psychiatry qualifies her to serve on our Board.

**Jan van Heek** has served on our Board since July 2014. Mr. van Heek advises biotechnology and other healthcare companies in commercial strategy development, financing, and business development. He was previously a partner at BioPoint Group, a biotech consulting company. Prior to establishing BioPoint in 2009, Mr. van Heek spent over 18 years at Genzyme Corporation, a Sanofi pharmaceutical company, including as an Executive Vice President and Senior Advisor to the chief executive officer. Mr. van Heek also previously served as a board member and chairman of the Audit Committee of Amarin Corporation, a publicly traded biopharmaceutical company. He was also a board member and chairman of the Audit Committee of ViaCell Corporation, a public company, from 2002 until it was sold to Perkin Elmer Corporation in 2007. He received an M.B.A. from St. Gallen University in Switzerland and an executive degree from Stanford Business School. Our Board believes that Mr. van Heek’s experience in the biotechnology industry and his executive experience, specifically his experience in executive officer positions at other companies in the biotechnology industry, as well as his service on other boards of directors, qualifies him to serve as a member of our Board.

### **Executive Officers**

The table below sets forth information about our executive officers, including their ages as of April 17, 2023. We have also included below a brief summary of the business experience of each of our executive officers.

<u>Name</u>	<u>Age</u>	<u>Position</u>
Dr. Remy Luthringer	62	Chief Executive Officer and Executive Chairman of the Board of Directors
Geoffrey Race	62	President
Frederick Ahlholm	57	SVP, Chief Financial Officer and Secretary

**Dr. Remy Luthringer** has served as our Chief Executive Officer since November 2014. Information regarding Dr. Luthringer can be found under the caption “Board of Directors” above.

**Geoffrey Race** has provided services to us since July 2010, first as a consultant and then as an employee beginning in May 2014. Mr. Race most recently held the positions of the Company’s Executive Vice President and Chief Financial Officer, from May 2014 to October 2021, and Chief Business Officer from January 2016 to October 2021. Prior to joining us, Mr. Race served as the Chief Executive Officer and acting Chief Financial Officer of Funxional Therapeutics Ltd., a clinical stage pharmaceutical company which was spun out of Cambridge University, UK, from June 2010 to November 2013. Mr. Race is currently a member of the board of directors of Huq Industries Ltd. Mr. Race is also a founder and director of Cyber Industries Ltd., a UK-based private company developing software for building management systems. He was a director of Sensyne Health plc and of F-star Therapeutics Ltd. Mr. Race is a Fellow of the Institute of Chartered Management Accountants and earned his M.B.A. from Durham University Business School (UK).

**Frederick Ahlholm** has provided services to us since January 2014, first as a consultant and then as an employee beginning in June 2014. Mr. Ahlholm most recently held the positions of the Company’s Vice President and Chief Accounting Officer from July 2014 to October 2021, and Senior Vice President of Finance from May 2015 to October 2021. Prior to joining us, from 2010 to 2013, Mr. Ahlholm served as Vice President of Finance and also as Chief Accounting Officer for Amarin Corporation, a commercial biopharmaceutical company. Mr. Ahlholm has over 15 years of experience leading the finance organization at publicly-traded biotech companies, is a CPA and earned his BA in Business Administration at the University of Notre Dame.

### **Family Relationships**

There are no family relationships among any of our directors or executive officers.

### **Audit Committee**

The Audit Committee of the Board was established by the Board in accordance with Section 3(a)(58)(A) of the Exchange Act to oversee the Company’s corporate accounting and financial reporting processes and audits of its financial statements. For this purpose, the Audit Committee performs several functions. The Audit Committee,

among other things, evaluates the performance of and assesses the qualifications of the independent registered public accounting firm; determines and approves the engagement of the independent registered public accounting firm; determines whether to retain or terminate the existing independent registered public accounting firm or to appoint and engage a new independent registered public accounting firm; reviews and approves the retention of the independent registered public accounting firm to perform any proposed permissible non-audit services; monitors the rotation of partners of the independent registered public accounting firm on the Company's audit engagement team as required by law; reviews and approves or rejects transactions between the Company and any related persons; confers with management regarding the effectiveness of internal controls over financial reporting; establishes procedures, as required under applicable law, for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters and the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters; and meets to review the Company's annual audited consolidated financial statements and quarterly unaudited consolidated financial statements with management and the independent registered public accounting firm.

The Audit Committee is currently composed of three directors: Ms. Hilleman (Chair), Mr. Doyle and Mr. van Heek. The Board has adopted a written Audit Committee charter that is available on the Company's website at <http://ir.minervaneurosciences.com/corporate-governance>.

The Board reviews the definition of independence for Audit Committee members as defined in the listing standards of The Nasdaq Stock Market LLC ("Nasdaq") on an annual basis, and has determined that Ms. Hilleman and Messrs. Doyle and van Heek are independent (as independence is currently defined in Rule 5605(c)(2)(A) of the Nasdaq listing standards).

The Board has also determined that each of Ms. Hilleman and Mr. van Heek qualifies as "audit committee financial experts," as defined in applicable SEC rules. The Board made a qualitative assessment of each of Ms. Hilleman's and Mr. van Heek's level of knowledge and experience based on a number of factors, including their formal education and experience serving on audit committees for public reporting companies. The Board has also determined that each of the Audit Committee members is able to read and understand fundamental financial statements.

### **Code of Ethics**

The Company has adopted a Code of Business Conduct and Ethics (the "Code of Ethics"), which applies to all officers, directors and employees. The Code of Ethics is available on the Company's website at <http://ir.minervaneurosciences.com/corporate-governance>. If the Company makes any substantive amendments to the Code of Ethics or grants any waiver from a provision of the Code of Ethics to any executive officer or director, the Company will promptly disclose the nature of the amendment or waiver on its website.

### **Delinquent Section 16(a) Reports**

Section 16(a) of the Exchange Act requires the Company's directors and executive officers, and persons who own more than ten percent of a registered class of the Company's equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of common stock and other equity securities of the Company. Officers, directors, and greater than ten percent stockholders are required by SEC regulations to furnish the Company with copies of all Section 16(a) forms they file.

To the Company's knowledge, based solely on a review of the copies of such reports furnished to the Company and written representations that no other reports were required, during the fiscal year ended December 31, 2022, all Section 16(a) filing requirements applicable to its officers, directors, and greater than ten percent beneficial owners were complied with, except that each of Messrs. Doyle, Hasler and Van Heek, Ms. Hilleman and Drs. Kupfer and Laghrissi-Thode, failed to timely file one Form 4 report, respectively, disclosing the acquisition of certain stock options that were granted by the Board on June 10, 2022. The Form 4 reports reporting such acquisitions were filed on June 28, 2022.

**ITEM 11. Executive Compensation****Executive Compensation****Summary Compensation Table**

The following table shows for the fiscal years ended December 31, 2022 and 2021, the compensation of the Company’s Chief Executive Officer and the two other most highly compensated executive officers as of December 31, 2022 (collectively, our “named executive officers” or “NEOs”).

<u>NAME AND PRINCIPAL POSITION</u>	<u>YEARS</u>	<u>SALARY (\$)</u>	<u>BONUS (\$)</u>	<u>OPTION AWARDS (\$)<sup>(2)</sup></u>	<u>ALL OTHER COMPENSATION (\$)</u>	<u>TOTAL (\$)</u>
Dr. Remy Luthringer	2022	600,096	247,540 <sup>(1)</sup>	421,095	5,946 <sup>(3)</sup>	1,274,677
Chief Executive Officer	2021	584,889	604,244	—	—	1,189,133
Geoffrey Race	2022	454,898	170,587 <sup>(1)</sup>	214,290	2,978 <sup>(4)</sup>	842,753
President	2021	442,293	434,815	—	3,331	880,439
Frederick Ahlholm	2022	415,600	140,265 <sup>(1)</sup>	173,550	11,622 <sup>(5)</sup>	741,037
SVP, Chief Financial Officer and Secretary	2021	379,692	220,013	—	10,978	610,683

(1) Represents the annual bonus paid in December 2022, which was 75% of the officer’s annual target bonus for 2022.

(2) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during 2022 computed in accordance with Financial Accounting Standard Board Accounting Standards Codification Topic 718 for stock-based compensation transactions (“ASC 718”). Assumptions used in valuing options are described in Note 7 to our consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 8, 2023. The aggregate grant date fair value does not take into account any estimated forfeitures related to service-vesting conditions. These amounts do not reflect the actual economic value that will be realized by the named executive officers upon the vesting or exercise of the stock options, or the sale of the common stock underlying such stock options.

(3) Represents \$5,946 paid in 2022 by the Company for Dr. Luthringer’s life insurance premiums.

(4) Represents \$2,978 paid in 2022 by the Company for Mr. Race’s life insurance premiums.

(5) Represents \$10,675 paid in 2022 by the Company in 401(k) contributions and \$947 paid in 2022 by the Company for Mr. Ahlholm’s life insurance premiums.



### Outstanding Equity Awards at Fiscal Year-End

The following table shows for the fiscal year ended December 31, 2022, certain information regarding outstanding equity awards at fiscal year-end for the named executive officers.

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Equity Incentive Plan Awards: Number of shares or units of stock that have not vested (#)	Equity Incentive Plan Awards: Market value of shares or units of stock that have not vested (\$)
Dr. Remy Luthringer	25,000	—	28.00	10/12/2030	88,077 <sup>(3)</sup>	140,042 <sup>(4)</sup>
	—	63,125 <sup>(1)</sup>	6.33	2/15/2032	—	—
	—	45,000 <sup>(2)</sup>	3.11	12/12/2032	—	—
Geoffrey Race	17,500	—	28.00	10/12/2030	46,987 <sup>(3)</sup>	74,709 <sup>(4)</sup>
	—	25,000 <sup>(1)</sup>	6.33	2/15/2032	—	—
	—	38,000 <sup>(2)</sup>	3.11	12/12/2032	—	—
Frederick Ahlholm	10,625	—	28.00	10/12/2030	19,843 <sup>(3)</sup>	31,550 <sup>(4)</sup>
	—	22,500 <sup>(1)</sup>	6.33	2/15/2032	—	—
	—	26,000 <sup>(2)</sup>	3.11	12/12/2032	—	—

- (1) 25% of the shares subject to the option vested and became exercisable on February 16, 2023 and the balance of the shares vest and become exercisable in a series of twelve equal quarterly installments upon the executive officer's completion of each quarter of service over the three-year period thereafter.
- (2) 25% of the shares subject to the option will vest and become exercisable on December 13, 2023 and the balance of the shares vest and become exercisable in a series of twelve equal quarterly installments upon the executive officer's completion of each quarter of service over the three-year period thereafter.
- (3) Consists of performance-based restricted stock units ("PRSUs") granted pursuant to our tender offer in August 2021, which vest as follows: (i) 50% of the PRSUs vest upon FDA acceptance of a new drug application for roluperidone, provided that such acceptance is not "over protest" and occurs within three years after the grant date, and (ii) the remaining unvested PRSUs vest upon roluperidone receiving FDA marketing approval, subject, in either case, to the grantee's continued service through the applicable milestone. The number of PRSUs assumes threshold achievement level of 50%, representing FDA acceptance of a new drug application for roluperidone within three years after the grant date.
- (4) The Company's stock price, trading on The Nasdaq Capital Market under the symbol "NERV", was \$1.59 as of December 30, 2022.

### Arrangements with our Executive Officers

Each of our named executive officers is party to a written employment agreement with us.

#### Dr. Remy Luthringer

We entered into an Amended and Restated Employment Agreement with Dr. Luthringer through our wholly owned subsidiary, Mind-NRG SARL, on August 1, 2016, as amended by that certain First Amendment to the Employment Agreement with Dr. Luthringer effective as of December 13, 2022, and as amended by that certain Second Amendment to the Employment Agreement with Dr. Luthringer effective as of March 6, 2023, which sets forth the current terms of his employment with us. Dr. Luthringer's principal place of work is the main office of the Company in Geneva, Switzerland. Effective January 1, 2022, Dr. Luthringer is entitled to an annual base salary of \$600,096. Dr. Luthringer is also eligible for a discretionary bonus payment for each calendar year of up to 55% of his base salary. Dr. Luthringer is also eligible to participate in the Company's employee benefit, welfare and other plans generally available to the other similarly situated employees of the Company, as may be maintained by the Company from time to time, and he is eligible for equity awards under the Company's equity incentive plans, subject to the Company's discretion.

Pursuant to Dr. Luthringer's employment agreement, he or the Company may terminate his employment upon six months' written notice, or immediately if there are "valid reasons" under Swiss law.

If Dr. Luthringer's employment with us ends due to his death, his beneficiaries or estate will be entitled to (1) payment of any earned but unpaid base salary; (2) two months of base salary; (3) payment of any vacation time earned but not used; (4) *pro rata* payment of his discretionary annual bonus; and (5) payment of any amounts accrued and payable under the terms of any of our benefit plans.

If Dr. Luthringer's employment with us ends due to his disability or we terminate his employment for "cause," he will be entitled to (1) payment of his base salary during the six-month written notice period; (2) payment of any earned but unpaid base salary; (3) payment of any vacation time earned but not used; and (4) payment of any amounts accrued and payable under the terms of any of our benefit plans.

If Dr. Luthringer's employment with us ends without "cause" and not by reason of disability, or he resigns for "good reason," he will be entitled to (1) payment of his base salary during the six-month written notice period; (2) payment of any earned but unpaid base salary; (3) payment of any vacation time earned but not used; (4) payment of any amounts accrued and payable under the terms of any of our benefit plans; (5) continued payment of his base salary for 12 months following his termination; (6) *pro rata* payment of his discretionary annual bonus; and (7) vesting of his outstanding equity awards as if he had completed an additional six months of continuous employment.

If Dr. Luthringer's employment with us or our successor ends due to his resignation for "good reason" or his termination by us or our successor without "cause," in each case within 12 months immediately following a change in control of the Company, Dr. Luthringer will be entitled to (1) payment of his base salary during the six-month written notice period; (2) payment of any earned but unpaid base salary; (3) payment of any vacation time earned but not used; (4) payment of any amounts accrued and payable under the terms of any of our benefit plans; (5) continued payment of his base salary for 18 months, following his termination (6) 100% of his target annual performance bonus for the year in which the termination occurs; and (7) vesting in full of all of his outstanding equity awards.

Dr. Luthringer's severance benefits are conditioned, among other things, on a satisfactory release of claims in favor of the Company and his compliance with post-termination obligations under his employment agreement.

For purposes of Dr. Luthringer's employment agreement, Dr. Luthringer may end his employment by resignation for "good reason" if, without his written consent, there is (1) a material diminution in the nature or scope of his responsibilities, duties or authority; (2) a material reduction in his base salary; (3) relocation of his principal work location more than 50 miles from the location of his principal work location as of immediately prior to such relocation; or (4) our material breach of his employment agreement.

Further, for purposes of Dr. Luthringer's employment agreement, we may terminate him for "cause" if he (1) is convicted of a felony or misdemeanor involving moral turpitude; (2) commits an act of fraud or embezzlement against us or our affiliates; (3) materially breaches his employment agreement and fails to cure such breach within 30 days; (4) materially violates any of our written policies and fails to cure such violation within 30 days; (5) materially fails or materially refuses to substantially perform his duties (other than by reason of a physical or mental impairment) or to implement the lawful written directives of our board of directors that are consistent with his position, and such material failure or material refusal continues for 30 days following written notice from the Company; (6) willfully engages in conduct or willfully omits to take any action, resulting in material injury to us or our affiliates, monetarily or otherwise (including with respect to our ability to comply with our legal or regulatory obligations); or (7) materially breaches his fiduciary duties as our officer or as a member of our board of directors.

## **Geoffrey Race**

We entered into an Amended and Restated Employment Agreement with Mr. Race through our wholly owned subsidiary, Mind-NRG SARL, on August 1, 2016, which sets forth the current terms of his employment with us, as amended by that certain First Amendment to Employment Agreement dated October 11, 2021. Mr. Race's principal place of work is Cambridge, United Kingdom. Effective January 1, 2022, Mr. Race was entitled to an annual base salary of \$454,898. Mr. Race is also eligible for a discretionary annual bonus payment for each calendar year of up to 50% of his base salary. Mr. Race is also eligible to participate in the Company's employee benefit, welfare and other plans generally available to the other similarly situated employees of the Company, as may be maintained by the Company from time to time, and he is eligible for equity awards under the Company's equity incentive plans, subject to the Company's discretion.

Pursuant to Mr. Race's employment agreement, he or the Company may terminate his employment upon 12-month written notice. The Company may also, in its sole and absolute discretion, immediately terminate Mr. Race's employment, provided Mr. Race receives payment of his salary during the 12-month written notice period in lieu of notice and with *pro rata* payment of his discretionary annual bonus.

If Mr. Race's employment with us ends due to his death, his beneficiaries and/or estate will be entitled to, among other accrued obligations, a payment of a *pro rata* portion of his annual performance bonus.

If Mr. Race's employment with us ends due to his termination by us other than for "cause," he will be entitled to (1) payment of his salary during the 12-month written notice period; (2) *pro rata* payment of his discretionary annual bonus; and (3) vesting of his outstanding equity awards as if he had completed an additional 12 months of continuous employment.

If Mr. Race's employment with us or our successor ends due to his resignation for "good reason" or his termination by us or our successor without "cause" (and not due to death) within 12 months immediately following a change in control of the Company, Mr. Race will be entitled to (1) payment of his salary during the 12-month written notice period; (2) *pro rata* payment of his discretionary annual bonus; (3) payment equal to 12 months' base salary; (4) 100% of his target annual performance bonus for the year in which the termination occurs; and (5) vesting in full of all of his outstanding equity awards.

Mr. Race's benefits are conditioned, among other things, on a satisfactory release of claims in favor of the Company and his compliance with post-termination obligations under his employment agreement.

For purposes of Mr. Race's employment agreement, Mr. Race may end his employment by resignation for "good reason" if, without his written consent, there is (1) a material diminution in the nature or scope of his responsibilities, duties or authority; (2) a material reduction in his base salary; (3) relocation of his principal work location more than 50 miles from the location of his principal work location as of immediately prior to such relocation; or (4) our material breach of his employment agreement.

Further, for purposes of Mr. Race's employment agreement, we may terminate him for "cause" if he (1) commits any act of gross misconduct; (2) commits any material or persistent breach of the terms of his employment agreement, including any willful neglect or refusal to carry out any of his duties or to comply with any reasonable and lawful instructions from our board; (3) materially violates any of our written policies and fails to cure such violation within thirty (30) days following written notice from us; (4) commits an act of fraud or embezzlement against us or our affiliates; (5) willfully engages in conduct or willfully omits to take any action, resulting in material injury to us or our affiliates, monetarily or otherwise (including with respect to our or our affiliates' ability to comply with our or their legal or regulatory obligations); (6) materially breaches his fiduciary duties as our officer or as a member of our board of directors; (7) is convicted of any criminal offense (other than an offense under the Road Traffic Acts for which a penalty of imprisonment cannot be imposed); (8) commits any act which constitutes an offense under the Bribery Act 2010 whether done for our benefit or not; (9) has a

bankruptcy order made against him or enters into a voluntary arrangement with his creditors; or (10) is prohibited by law from holding office in the Company or any other company or is disqualified or disbarred from membership of, or be subject to any serious disciplinary sanction by any professional or other body, which undermines the confidence of the board of directors in his continued employment with the Company.

### ***Frederick Ahlholm***

We entered into an Amended and Restated Employment Agreement with Mr. Ahlholm on October 11, 2021, which replaced and superseded the May 30, 2014 and the August 1, 2016 offer letters between Mr. Ahlholm and us. Mr. Ahlholm's principal place of work is Waltham, Massachusetts. Effective as of the Amended and Restated Agreement, Mr. Ahlholm was entitled to an annual base salary of \$400,000, which increased to \$415,600 starting January 1, 2022. Mr. Ahlholm is also eligible to receive a discretionary bonus payment for each calendar year that ends during his employment of up to 45% of his base salary for that calendar year. Mr. Ahlholm is also eligible to participate in the Company's employee benefit, welfare and other plans generally available to the other similarly situated employees of the Company, and is eligible for equity awards under the Company's equity incentive plans, subject to the Company's discretion.

Pursuant to Mr. Ahlholm's employment agreement, if his employment with us ends due to his death, his beneficiaries or estate will be entitled to (1) payment of any earned but unpaid base salary; (2) payment of any vacation time earned but not used; (3) pro-rata payment of his discretionary annual bonus; and (4) payment of any amounts accrued and payable under the terms of any of our benefit plans.

If Mr. Ahlholm's employment with us ends due to his disability or we terminate his employment for "cause," he will be entitled to (1) payment of any earned but unpaid base salary; (2) payment of any vacation time earned but not used; and (3) payment of any amounts accrued and payable under the terms of any of our benefit plans.

If Mr. Ahlholm's employment with us ends due to his termination by us without "cause," he will be entitled to (1) payment of his salary for 9 months; (2) payment of his COBRA premiums, less the amount charged to active employees for health coverage, for up to 9 months; (3) pro-rata payment of his discretionary annual bonus; (4) vesting of his outstanding equity awards as to that number of the then-unvested underlying shares of common stock that would have vested over the 9-month period following the end of Mr. Ahlholm's employment; and (5) for a period of nine (9) months immediately following termination, waiver of the obligation that Mr. Ahlholm remain in service, such that Mr. Ahlholm's PRSUs would remain eligible to vest based solely on satisfaction of the applicable performance milestones prior to the expiration of such 9-month period.

If Mr. Ahlholm's employment with us or our successor ends due to his resignation for "good reason" or his termination by us or our successor without "cause," within 12 months immediately following a change in control of the Company, Mr. Ahlholm will be entitled to (1) payment of his salary for 12 months; (2) payment of his COBRA premiums, less the amount charged to active employees for health coverage, for up to 12 months; (3) 100% of his discretionary bonus for the year in which the termination occurs; and (4) vesting of his outstanding equity awards as to all then-unvested underlying shares of common stock (including with respect to all outstanding unvested options and any unvested PRSUs).

Mr. Ahlholm's benefits are conditioned, among other things, on a satisfactory release of claims in favor of the Company and his compliance with post-termination obligations under his employment agreement.

For purposes of Mr. Ahlholm's employment agreement, Mr. Ahlholm may end his employment by resignation for "good reason" if, without his written consent, there is (1) a material diminution in the nature or scope of his responsibilities, duties or authority (provided, however, that a requirement that Mr. Ahlholm act as officer, director or in any other corporate function within the group shall not constitute good reason); (2) a material reduction in his base salary; (3) relocation of his principal work location more than 50 miles from the location of his principal work location as of immediately prior to such relocation; or (4) our material breach of his

employment agreement. Further, for purposes of Mr. Ahlholm's employment agreement, we may terminate him for "cause" if he (1) is convicted of a felony or misdemeanor involving moral turpitude; (2) commits an act of fraud or embezzlement against us or our affiliates; (3) uses or discloses without authorization confidential information or trade secrets of the Company for his benefit or materially breaches a written agreement between him and the Company; (4) materially violates any of our written policies and fails to cure such violation within 30 days; (5) materially fails or materially refuses to substantially perform his duties (other than by reason of a physical or mental impairment) or to implement the lawful written directives of our board of directors that are consistent with his position, and such material failure or material refusal continues for 30 days following written notice from the Company; (6) willfully engages in conduct or willfully omits to take any action, resulting in material injury to us or our affiliates, monetarily or otherwise (including with respect to our ability to comply with our legal or regulatory obligations); or (7) materially breaches his fiduciary duties as our officer or as a member of our board of directors.

#### ***Confidentiality and Assignment Agreements***

Each of the employment agreements with our named executive officers contains provisions with respect to confidential information and assignment of inventions. Among other things, each agreement requires each named executive officer to refrain from disclosing any of our proprietary information received during the course of employment or service with us, and to assign to us any inventions conceived or developed during the course of employment or service with us.

#### ***Payments Upon a Change in Control***

In addition to payments and benefits under their employment agreements described above, pursuant to the terms of our Amended and Restated 2013 Equity Incentive Plan, if one or more of the awards granted to our named executive officers are not assumed or otherwise continued in effect by the successor corporation in the event of a change in control, such awards automatically accelerate and vest in full immediately prior to the change in control (assuming such officer remains in continuous service as of immediately prior to such change in control).

## Pay Versus Performance

As required by Section 953(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and Item 402(v) of Regulation S-K, we are providing the following information about the relationship between executive compensation and certain financial performance metrics. The disclosure included in this section is prescribed by SEC rules and does not necessarily align with how we or the compensation committee view the link between financial performance and the compensation actually received or realized by our named executive officers. All information provided above under the “Pay Versus Performance” heading will not be deemed to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing, except to the extent the Company specifically incorporates such information by reference.

### Pay Versus Performance Table

The table below presents information on the compensation of our Chief Executive Officer and other named executive officers in comparison to certain performance metrics for 2022 and 2021. These metrics are not those that the compensation committee uses when setting executive compensation. The use of the term *Compensation Actually Paid* is required by the rules and regulations of the SEC, and under such rules, CAP was calculated by adjusting the Summary Compensation Table (“SCT”) Total values for the applicable year as described in the footnotes to the table.

Year	Summary Compensation Table Total for PEO <sup>(1)(2)</sup>	Compensation Actually Paid to PEO <sup>(1)(3)</sup>	Average Summary Compensation Table Total for Non-PEO NEOs <sup>(1)(2)</sup>	Average Compensation Actually Paid to Non-PEO NEOs <sup>(1)(3)</sup>	Value of Initial Fixed \$100 Investment Based On: Total Shareholder Return (TSR) <sup>(4)</sup>	Net Income (Loss) <sup>(5)</sup>
	(a)	(b)	(c)	(d)	(e)	(f)
2022	\$ 1,274,677	\$ 1,283,412	\$ 791,895	\$ 798,131	\$ 43	\$(32,108,676)
2021	\$ 1,189,133	\$(1,253,195)	\$ 716,196	\$ (108,360)	\$ 34	\$(49,905,952)

- (1) The Principal Executive Officer (“PEO”) information reflected in columns (a) and (b) relates to our CEO, Dr. Remy Luthringer. The non-Principal Executive Officer (“non-PEO”) NEOs information reflected in columns (c) and (d) above relates to G. Race and F. Ahlholm during 2022 and G. Race, F. Ahlholm and M. Davidson during 2021.
- (2) The amounts shown in this column are the amounts of total compensation reported for Dr. Luthringer, or the average total compensation reported for the non-PEO NEOs, as applicable, for each corresponding year in the “Total” column of the Summary Compensation. Please refer to “Executive Compensation—Compensation Tables—Summary Compensation Table.”
- (3) The amounts shown have been calculated in accordance with Item 402(v) of Regulation S-K and do not reflect compensation actually realized or received by the Company’s PEO and non-PEO NEOs. In accordance with the requirements of Item 402(v) of Regulation S-K, adjustments were made to Dr. Luthringer’s total compensation, or the average total compensation of the non-PEO NEOs, as applicable, as described in the tables below.
- (4) Represents the cumulative total shareholder return (“TSR”) as calculated in accordance with Item 201(e) of Regulation S-X, assuming an initial fixed investment of \$100. We have never declared or paid any dividends on our common stock.
- (5) Represents the net income (loss) as disclosed in the audited annual financial statements.

To calculate the CAP, the following amounts were deducted from and added to the SCT total compensation:

**PEO SCT Total to CAP Reconciliation**

Year	Salary	Stock Awards	Bonus, Non-Equity Incentive Compensation, and Stock Awards	All Other Compensation <sup>(1)</sup>	SCT Total	Deductions from SCT Total <sup>(2)</sup>	Fair Value Adjustments to SCT Total <sup>(3)</sup>	CAP
2022	\$600,096	\$421,095	\$ 247,540	\$ 5,946	\$1,274,677	\$(421,095)	\$ 429,830	\$ 1,283,412
2021	\$584,889	—	\$ 604,244	—	\$1,189,133	—	\$(2,442,328)	\$(1,253,195)

**Average Non-PEO NEOs SCT Total to CAP Reconciliation**

Year	Salary	Stock Awards	Bonus, Non-Equity Incentive Compensation, and Stock Awards	All Other Compensation <sup>(1)</sup>	SCT Total	Deductions from SCT Total <sup>(2)</sup>	Fair Value Adjustments to SCT Total <sup>(3)</sup>	CAP
2022	\$435,249	\$193,920	\$ 155,426	\$ 7,300	\$791,895	\$(193,920)	\$ 200,156	\$ 798,131
2021	\$407,226	—	\$ 304,200	\$ 4,770	\$716,196	—	\$(824,556)	\$(108,360)

(1) Reflects “all other compensation” reported in the SCT for each year shown.

(2) Represents the grant date fair value of equity-based awards granted each year.

(3) Reflects the value of equity calculated in accordance with the SEC methodology for determining the CAP for each year shown. The equity component of the CAP for fiscal years 2022 and 2021 are further detailed in the supplemental tables below. The CAP was negative during 2021 primarily due to the stock option exchange program, which was effective on August 6, 2021.

**Supplemental Tables**

**PEO Equity Component of CAP**

Year	Fair Value of Current Year Equity Awards at December 31, <sup>(1)</sup>	Change in Fair Value of Prior Years' Awards Unvested at December 31,	Change in Fair Value of Prior Years' Awards Vested through the Year Ended December 31,	Change in Fair Value of Prior Years' Awards Failed to Vest through the Year Ended December 31,	Equity Value Included in CAP
	(a)	(b)	(c)	(d)	(e) = (a)+(b)+(c)+(d)
2022	\$ 428,498	—	\$ 1,332	—	\$ 429,830
2021	—	\$ (6,990)	\$ (3,496)	\$ (2,431,843)	\$ (2,442,328)

**Average Non-PEO NEOs Equity Component of CAP**

Year	Fair Value of Current Year Equity Awards at December 31, <sup>(1)</sup>	Change in Fair Value of Prior Years' Awards Unvested at December 31,	Change in Fair Value of Prior Years' Awards Vested through the Year Ended December 31,	Change in Fair Value of Prior Years' Awards Failed to Vest through the Year Ended December 31,	Equity Value Included in CAP
	(a)	(b)	(c)	(d)	(e) = (a)+(b)+(c)+(d)
2022	\$ 199,407	—	\$ 749	—	\$ 200,156
2021	—	\$ (3,611)	\$ (1,806)	\$ (819,139)	\$(824,556)

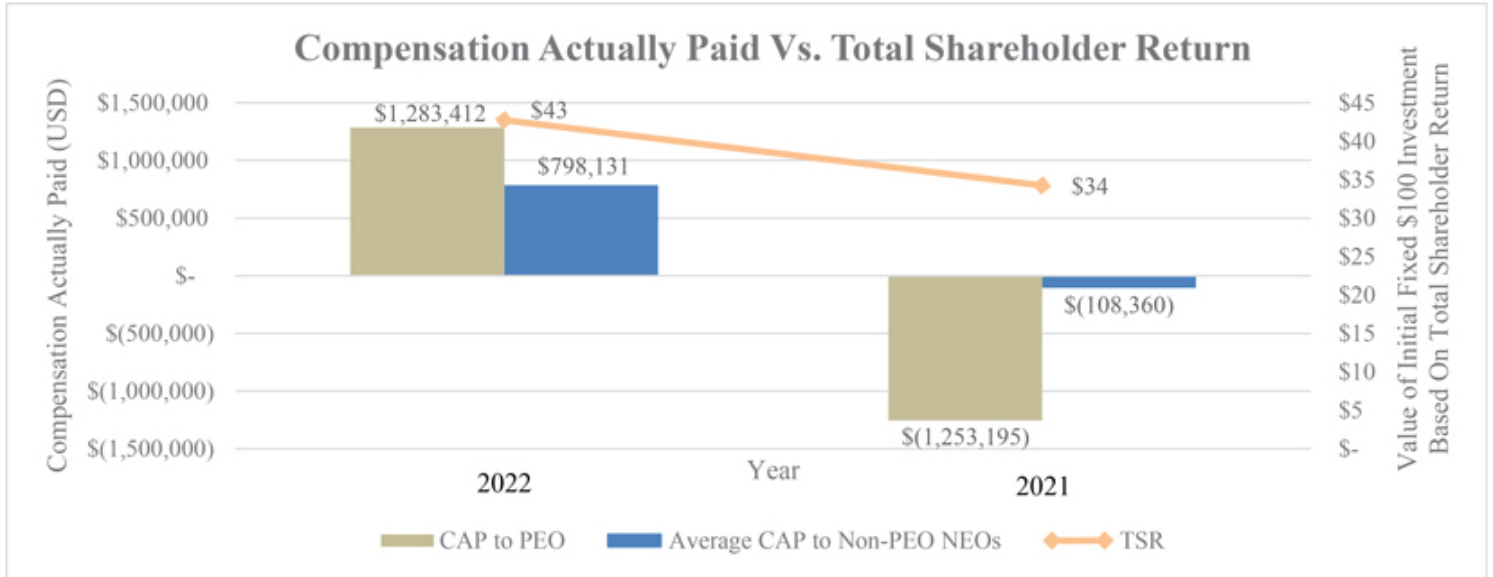
(1) No equity awards were granted during 2021.

**Pay Versus Performance Narrative Disclosure**

In accordance with Item 402(v) of Regulation S-K, we are providing the following descriptions of the relationships between information presented in the Pay Versus Performance table on the CAP and each of net loss and TSR. We do not utilize TSR or net loss in our executive compensation program.

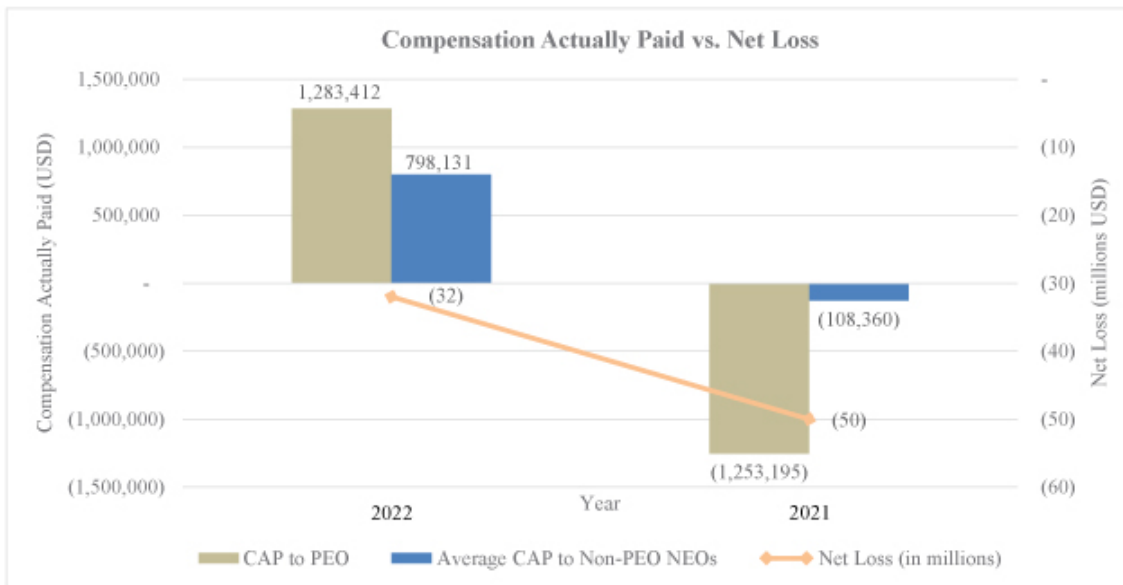
**Compensation Actually Paid vs. Total Shareholder Return**

The following graph illustrates the relationship of the CAP for our PEO and non-PEO NEOs, as calculated pursuant to SEC rules, to our cumulative TSR over the two years presented in the Pay Versus Performance table.



**Compensation Actually Paid vs. Net Income (Loss)**

The following graph illustrates the relationship of the CAP for our PEO and non-PEO NEOs, as calculated pursuant to SEC rules, to our net income (loss) over the two years presented in the Pay Versus Performance table.





## Director Compensation

### Director Compensation Table

The following table presents the total compensation for each person, other than our Chief Executive Officer, who served as a member of our Board during 2022. Other than as set forth in the table and described more fully below, we did not pay any compensation, reimburse any expense of, make any equity awards or non-equity awards to, or pay any other compensation to any of the non-employee members of our Board in 2022.

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Option Awards<sup>(1)</sup> (2) (\$)</u>	<u>Total (\$)</u>
William F. Doyle	64,500	5,475	69,975
Hans Peter Hasler	45,000	5,475	50,475
Jeryl Hilleman	50,000	5,475	55,475
Dr. David Kupfer	43,000	5,475	48,475
Dr. Fouzia Laghrissi-Thode	41,000	5,475	46,475
Jan van Heek	42,500	5,475	47,975

- (1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during 2022 computed in accordance with ASC 718. The assumptions we used in valuing the option awards are described in Note 7 to our consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 8, 2023. The aggregate grant date fair value does not take into account any estimated forfeitures related to service-vesting conditions. These amounts do not reflect the actual economic value that will be realized by a director upon the vesting of the stock options, the exercise of the stock options or the sale of the common stock underlying such stock options. Pursuant to our non-employee director compensation policy, each of our non-employee directors was granted an option to purchase 2,500 shares of our common stock on June 10, 2022 at an exercise price of \$3.32 per share.
- (2) As of December 31, 2022, the aggregate number of shares subject to outstanding equity awards held by our non-employee directors who served on our Board during 2022 was:

<u>Name</u>	<u>Stock Options</u>
William F. Doyle	27,500
Hans Peter Hasler	17,500
Jeryl Hilleman	15,000
Dr. David Kupfer	18,749
Dr. Fouzia Laghrissi-Thode	18,749
Jan van Heek	23,056

### Non-Employee Director Compensation Policy

Our Amended and Restated Non-Employee Director Compensation Plan, as adopted by our Board, became effective April 1, 2018. Under the terms of the current plan, each non-employee director is eligible to receive an annual cash retainer of \$35,000 and the non-employee chairperson of the Board is eligible to receive an additional annual cash retainer of \$50,000. The Lead Independent Director is eligible to receive an additional annual cash retainer of \$10,000. The chairpersons of the Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee are each eligible to receive additional annual cash retainers of \$15,000, \$12,000 and \$8,000, respectively. Other members of the Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee are eligible to receive additional annual cash retainers of \$7,500, \$6,000 and \$4,000, respectively.

Under the terms of the current plan, each newly elected non-employee member of the Board is also eligible to receive a one-time grant of an option to purchase 5,000 shares of common stock promptly following election or appointment to the Board (the “New Director Welcome Options”). The New Director Welcome Options vest quarterly over three years, provided that the applicable non-employee director is, as of such vesting date, a director of the Company.

In addition, each non-employee director is eligible to receive an annual option grant to purchase 2,500 shares of common stock per year (the “New Annual Grants”). The New Annual Grants vest in equal quarterly installments over one year, provided that the applicable non-employee director is, as of such vesting date, a director of the Company.

**ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The following table sets forth certain information regarding the ownership of the Company's common stock as of March 31, 2023 by: (i) each director; (ii) each named executive officer; (iii) all executive officers and directors of the Company as a group; and (iv) all those known by the Company to be beneficial owners of more than five percent of its common stock.

Beneficial ownership of securities is determined according to the rules of the SEC and generally means, with respect to a security, that a person or entity possesses sole or shared voting or investment power of such security, including options and warrants that are currently exercisable or will be exercisable within 60 days of March 31, 2023. Options to purchase shares of our common stock that are exercisable within 60 days of March 31, 2023 are deemed to be beneficially owned by the person holding these options for the purpose of computing percentage ownership of that person, but they are not treated as outstanding for the purpose of computing any other person's ownership percentage.

This table is based upon information supplied by officers, directors and principal stockholders and Schedules 13G or 13D filed with the SEC. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, we believe that all persons named in the table have sole voting and investment power with respect to all shares of our common stock beneficially owned by them. Applicable percentages are based on 5,340,193 shares of common stock outstanding as of March 31, 2023, adjusted as required by rules promulgated by the SEC.

<u>Name of Beneficial Owner<sup>(1)</sup></u>	<u>Number of Shares of Common Stock Beneficially Owned</u>	<u>Percentage of Ownership</u>
<b>Named Executive Officers and Directors:</b>		
Dr. Remy Luthringer <sup>(2)</sup>	164,919	3.1%
Geoffrey Race <sup>(3)</sup>	50,171	*
Frederick Ahlholm <sup>(4)</sup>	17,506	*
William F. Doyle <sup>(5)</sup>	30,139	*
Dr. Fouzia Laghrissi-Thode <sup>(6)</sup>	18,124	*
Dr. David Kupfer <sup>(7)</sup>	42,060	*
Hans Peter Hasler <sup>(8)</sup>	18,125	*
Jan van Heek <sup>(9)</sup>	24,973	*
Jeryl Hilleman <sup>(10)</sup>	14,500	*
<b>All current executive officers and directors as a group (9 persons)<sup>(11)</sup></b>	<b>380,517</b>	<b>6.9%</b>
<b>Greater than 5% Stockholders:</b>		
Funds affiliated with Federated Hermes, Inc. <sup>(12)</sup>	1,201,275	22.5%

\* Represents beneficial ownership of less than 1% of our outstanding common stock.

- (1) Unless otherwise noted, the address of each of those listed in the table is c/o Minerva Neurosciences, Inc., 1500 District Avenue, Burlington, MA 01803.
- (2) Consists of (a) 115,825 shares of common stock beneficially owned by Wint2felden Holding SA, a company wholly owned by Dr. Luthringer; (b) 8,311 shares of common stock owned by Dr. Luthringer himself, and (c) options to purchase 40,783 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (3) Consists of (a) 26,419 shares of common stock and (b) options to purchase 23,752 shares of common stock that are exercisable within 60 days of March 31, 2023.

- (4) Consists of (a) 1,255 shares of common stock and (b) options to purchase 16,251 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (5) Consists of (a) 3,264 shares of common stock and (b) options to purchase 26,875 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (6) Consists of options to purchase 18,124 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (7) Consists of (a) 23,936 shares of common stock and (b) options to purchase 18,124 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (8) Consists of (a) 1,250 shares of common stock and (b) options to purchase 16,875 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (9) Consists of (a) 2,542 shares of common stock and (b) options to purchase 22,431 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (10) Consists of (a) 125 shares of common stock and (b) options to purchase 14,375 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (11) Consists of (a) 182,927 shares of common stock and (b) options to purchase 197,590 shares of common stock that are exercisable within 60 days of March 31, 2023.
- (12) This information is based solely on the information reported on the Schedule 13G/A filed by Federated Hermes, Inc. on February 1, 2023. Federated Hermes, Inc. (the "Federated Parent") is the parent holding company of Federated Equity Management Company of Pennsylvania and Federated Global Investment Management Corp. (the "Federated Investment Advisers"), which act as investment advisers to registered investment companies and separate accounts that collectively own 1,201,275 shares of common stock. The Federated Investment Advisers are wholly owned subsidiaries of FII Holdings, Inc., which is a wholly owned subsidiary of the Federated Parent. All of the Federated Parent's outstanding voting stock is held in the Voting Shares Irrevocable Trust for which Thomas R. Donahue and J. Christopher Donahue act as trustees. The address of Federated Investors is Federated Investors Tower, 1011 Liberty Avenue, Pittsburgh, Pennsylvania 15222.

## Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides certain information with respect to all of the Company's equity compensation plans in effect as of December 31, 2022.

### Equity Compensation Plan Information

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, stock appreciation rights, stock awards and restricted stock units (a)<sup>(1)</sup></u>	<u>Weighted-average exercise price of outstanding options, stock appreciation rights, stock awards and restricted stock units<sup>(2)</sup></u>	<u>Number of securities remaining available for issuance under equity compensation plans (excluding securities reflected in column (a))</u>
Equity compensation plans approved by security holders	1,157,351	\$ 15.69	118,666
Equity compensation plans not approved by security holders	—	—	—
<b>Total</b>	<b>1,157,351</b>	<b>\$ 15.69</b>	<b>118,666</b>

(1) Consists of 700,929 shares subject to outstanding options and 456,422 shares subject to outstanding performance-based restricted stock unit awards.

(2) The weighted-average exercise price does not reflect the shares of our common stock that will be issued in connection with the settlement of performance-based restricted stock unit awards, which have no exercise price.

## **ITEM 13. Certain Relationships and Related Person Transactions, and Director Independence**

### **Policies and Procedures Regarding Transactions with Related Persons**

We have adopted a related person transaction policy that sets forth our procedures for the identification, review, consideration, and approval or ratification of related person transactions. For purposes of our policy only, a related person transaction is a transaction, arrangement, or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were, or will be participants in which the amount involved exceeds \$120,000. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is any executive officer, director, or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated, or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our Audit Committee, or, if Audit Committee approval would be inappropriate, to another independent body of our Board, for review, consideration, and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party, or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related person transactions and to effectuate the terms of the policy. In addition, under our Code of Ethics, our employees and directors have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest.

In considering related person transactions, our Audit Committee, or other independent body of our Board, will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs, and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties, or to or from employees generally.

The policy requires that, in determining whether to approve, ratify, or reject a related person transaction, our Audit Committee, or other independent body of our Board, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our Audit Committee, or other independent body of our Board, determines in the good faith exercise of its discretion.

All of the transactions described below under "Certain Related Person Transactions" were approved by the Audit Committee in accordance with our related person transaction policy.

### **Certain Relationships and Related Person Transactions**

Other than compensation arrangements for our directors and executive officers, which are described elsewhere in this Amendment to Annual Report on Form 10-K, below is a description of transactions since January 1, 2021 to which the Company was a party or will be a party, in which:

- the amounts involved exceeded or will exceed \$120,000 (or, if less, 1% of the average of our total assets at December 31, 2022 and 2021, as applicable); and

- any of our directors, executive officers or holders of more than 5% of the company's capital stock, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

#### ***Arrangement with PPRS Research, Inc.***

Dr. Jay B. Saoud, the Company's former Senior Vice President, Head of Research and Development, provides part-time consulting services to PPRS Research, Inc., where he serves as Head of Biometrics, Pharmacokinetics, and Medical Writing. In 2021 and 2022, the Company paid PPRS Research, Inc. approximately \$2.2 million and \$2.9 million, respectively, for program and project management services, including research and development services and coordination with investigators and contract research organizations.

#### ***Transition, Separation, and Consulting Agreement with Dr. Jay B. Saoud***

Dr. Saoud resigned from the position of Senior Vice President, Head of Research and Development, effective September 15, 2021. In connection with his resignation, Dr. Saoud and the Company entered into a Transition, Separation, and Consulting Agreement, as amended by that certain First Amendment effective July 1, 2022 and that certain Second Amendment effective January 1, 2023, pursuant to which Dr. Saoud continued providing services as a consultant to the Company from September 15, 2021. Dr. Saoud's consulting services will end on June 30, 2023, subject to termination or renewal. Effective as of January 1, 2023 and through March 15, 2023, Dr. Saoud was entitled to receive \$24,000 for up to fifteen hours of consulting services per week for a four-week period. Effective March 16, 2023 and through June 30, 2023, Dr. Saoud will be entitled to receive \$27,000 for up to fifteen hours of consulting services per week for a four-week period. In the event that Dr. Saoud performs more than fifteen hours of consulting services per week, the Company will pay Dr. Saoud \$412.50 per hour for the first twenty hours of services in excess of fifteen hours per week, and \$500 per hour for any additional consulting services performed thereafter.

In 2021 and 2022, the Company paid Dr. Saoud approximately \$136,600 and \$603,000, respectively, for consulting services.

#### ***Arrangement with V-Watch SA***

In January 2016, we entered into an agreement, under which we paid approximately \$380,000 to license a device for monitoring sleep from V-Watch SA ("V-Watch"), for use in certain of our clinical trials. Dr. Luthringer is the Chairman of the Board of Directors of V-Watch and funds affiliated with Index Ventures hold greater than 10% of the outstanding capital stock of V-Watch. Dr. Luthringer does not receive compensation from V-Watch and will not receive any consideration as a result of our payments to V-Watch in connection with our clinical trials, nor will funds affiliated with Index Ventures.

#### ***Compensation Arrangements and Equity Awards for Executive Officers and Directors***

We have employment arrangements with our executive officers that, among other things, provide for certain change in control benefits, as well as severance benefits for executive officers. For a description of these agreements with our named executive officers, see "Executive Compensation."

We have granted stock options and performance-based restricted stock units to our executive officers and our directors. For a description of these equity awards to our named executive officers and directors, see "Executive Compensation."

#### ***Indemnification Agreements for Executive Officers and Directors***

We have entered into indemnification agreements with each of our directors and certain of our executive officers. These agreements require us to indemnify these individuals and, in certain cases, affiliates of such individuals, to

the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified.

### ***Stock Option Exchange Program***

In June 2021, our stockholders approved a one-time stock option exchange program, which would permit eligible employees to surrender out-of-the-money, or “underwater”, stock options in exchange for a grant of fewer New PRSUs, that may be settled for shares of our common stock under our Amended and Restate 2013 Equity Incentive Plan. On August 6, 2021, we granted 476,640 New PRSUs in exchange for the cancellation of 953,980 shares of our common stock.

### **Director Independence**

Under the Nasdaq listing standards, a majority of the members of our Board must qualify as “independent,” as affirmatively determined by our Board.

Based on information provided by each director concerning his or her background, employment and affiliations, the Board has determined that none of our directors, other than Dr. Luthringer, has any relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director, and affirmatively determined that each of our directors, other than Dr. Luthringer, is “independent” as that term is defined under the Nasdaq listing standards. In making these determinations, the Board considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our Board deemed relevant in determining their independence, including the beneficial ownership of securities of our company by each non-employee director and the transactions described in the section titled “Certain Relationships and Related Person Transactions.” The Board also determined that each member of our Audit, Compensation and Nominating and Corporate Governance Committees satisfies the independence standards for such committees established by the SEC and the Nasdaq listing standards, as applicable.



## ITEM 14. Principal Accounting Fees and Services

### Principal Accountant Fees and Services

The following table presents the aggregate fees billed to the Company for the fiscal years ended December 31, 2022 and 2021, by Deloitte & Touche LLP, the Company's principal accountant.

	Fiscal Year	
	2022	2021
Audit fees <sup>(1)</sup>	\$559,415	\$478,000
Audit-related fees <sup>(2)</sup>	\$ 60,970	\$ —
Tax fees	\$ —	\$ —
All other fees <sup>(3)</sup>	\$ 1,895	\$ —
Total fees	\$622,280	\$478,000

- (1) For both fiscal years ended December 31, 2022 and 2021, audit fees represent fees for audit services rendered in connection with the audit of our consolidated financial statements, as well as fees associated with reviews of documents filed with the SEC, our Annual Report on Form 10-K and our quarterly consolidated financial statements included in our Quarterly Reports on Form 10-Q. For the fiscal year ended December 31, 2022, audit fees also include those associated with the filing of a registration statements on Form S-3, and the delivery of related consents.
- (2) For fiscal year ended December 31 2022, included in audit-related fees are those associated with the royalty sale accounting consultations.
- (3) For fiscal years ended December 31, 2022, included in all other fees are fees related to access to the Deloitte Accounting Research Tool.

All services provided for fiscal 2022 and 2021 described above were pre-approved by the Audit Committee.

In connection with the audit of the 2022 consolidated financial statements, the Company entered into an engagement agreement with Deloitte & Touche LLP that sets forth the terms by which Deloitte & Touche LLP will perform audit services for the Company.

### Pre-Approval Policies and Procedures

The Audit Committee has adopted a policy and procedures for the pre-approval of audit and non-audit services rendered by the Company's independent registered public accounting firm, Deloitte & Touche LLP. The policy generally pre-approves specified services in the defined categories of audit services, audit-related services, and tax services up to specified amounts. Pre-approval may also be given as part of the Audit Committee's approval of the scope of the engagement of the independent auditor, or on an individual, explicit, case-by-case basis before the independent auditor is engaged to provide each service. The pre-approval of services may be delegated to one or more of the Audit Committee's members, but the decision must be reported to the full Audit Committee at its next scheduled meeting.

The Audit Committee has determined that the rendering of services other than audit services by Deloitte & Touche LLP is compatible with maintaining the principal accountant's independence.

**PART IV**

**ITEM 15. Exhibits and Financial Statement Schedules**

(a)(1) Financial Statements

No financial statement or supplemental data are filed with this Amendment to Annual Report on Form 10-K. See Index to Financial Statements and Supplemental Data of the Original 10-K.

(a)(2) Financial Statement Schedule

All schedules are omitted for the reason that they are not required or the information is otherwise supplied in Item 8. "Financial Statements and Supplementary Data" in the Original 10-K.

(a)(3) Exhibits

The exhibits required to be filed as part of this report are listed in the Exhibit List attached hereto and are incorporated herein by reference.

<u>Exhibit No.</u>	<u>Description of Exhibit</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed Herewith</u>
3.1	<a href="#">Amended and Restated Certificate of Incorporation of the Registrant</a>	S-1/A	333-195169	3.1	June 10, 2014	
3.2	<a href="#">Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Registrant</a>	8-K	001-36517	3.1	June 17, 2022	
3.3	<a href="#">Amended and Restated Bylaws of the Registrant</a>	10-Q	001-36517	3.2	November 4, 2019	
4.1	<a href="#">Form of Common Stock Certificate</a>	S-1/A	333-195169	4.1	June 10, 2014	
4.2	<a href="#">Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934</a>	10-K	001-36517	4.2	March 8, 2023	
10.1	<a href="#">Share Purchase Agreement between the Registrant, Mind-NRG SA and Various Shareholders dated as of February 11, 2014</a>	S-1	333-195169	10.13	April 9, 2014	
10.2†	<a href="#">Form of Indemnification Agreement between the Registrant and each of its directors and executive officers</a>	S-1/A	333-195169	10.1	June 10, 2014	
10.3*	<a href="#">License Agreement between Mitsubishi Pharma Corporation and the Registrant f/k/a Cyrenaic Pharmaceuticals, Inc., dated as of August 30, 2007</a>	S-1/A	333-195169	10.2	June 10, 2014	

<u>Exhibit No.</u>	<u>Description of Exhibit</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed Herewith</u>
10.4*	<a href="#"><u>Amendment to License Agreement between Mitsubishi Tanabe Pharma Corporation and the Registrant f/k/a Cyrenaic Pharmaceuticals, Inc., dated as of June 16, 2011</u></a>	S-1/A	333-195169	10.3	June 10, 2014	
10.5*	<a href="#"><u>Second Amendment to License Agreement between Mitsubishi Tanabe Pharma Corporation and the Registrant, dated as of January 20, 2014</u></a>	S-1/A	333-195169	10.4	June 10, 2014	
10.6*	<a href="#"><u>License Agreement between Mitsubishi Tanabe Pharma Corporation and the Registrant as successor in interest to Sonkei Pharmaceuticals, Inc., dated as of September 1, 2008</u></a>	S-1/A	333-195169	10.5	June 10, 2014	
10.7*	<a href="#"><u>Amendment to License Agreement between Mitsubishi Tanabe Pharma Corporation and the Registrant, dated as of January 20, 2014</u></a>	S-1/A	333-195169	10.6	June 10, 2014	
10.8*	<a href="#"><u>Co-Development and License Agreement between Janssen Pharmaceutica, N.V. and the Registrant, dated as of February 13, 2014</u></a>	S-1/A	333-195169	10.7	June 10, 2014	
10.9	<a href="#"><u>Form of Securities Purchase Agreement between certain investors referenced therein and the Registrant, dated as of March 13, 2015</u></a>	8-K	001-36517	10.1	March 18, 2015	
10.10	<a href="#"><u>Form of Registration Rights Agreement between certain investors referenced therein and the Registrant, dated as of March 13, 2015</u></a>	8-K	001-36517	10.3	March 18, 2015	
10.11	<a href="#"><u>Second Amendment to License Agreement between Mitsubishi Tanabe Pharma Corporation and the Registrant, dated as of April 21, 2015</u></a>	10-Q	001-36517	10.5	May 7, 2015	
10.12†	<a href="#"><u>Amended and Restated Non-Employee Director Compensation Plan</u></a>	10-Q	001-36517	10.2	August 2, 2018	

<u>Exhibit No.</u>	<u>Description of Exhibit</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed Herewith</u>
10.13	<a href="#">Common Stock Purchase Agreement, dated March 17, 2016, by and between David Kupfer and the Registrant</a>	8-K	001-36517	10.1	March 18, 2016	
10.14†	<a href="#">Employment Agreement, dated as of August 1, 2016, by and between Mind-NRG SARL and Dr. Remy Luthringer</a>	10-Q	001-36517	10.1	August 4, 2016	
10.15†	<a href="#">Employment Agreement, dated as of August 1, 2016, by and between Mind-NRG SARL and Geoffrey Race</a>	10-Q	001-36517	10.2	August 4, 2016	
10.16†	<a href="#">Employment Agreement, dated as of August 1, 2016, by and between the Registrant and Frederick Ahlholm</a>	10-Q	001-36517	10.3	August 4, 2016	
10.17†	<a href="#">Form of Restricted Stock Unit Agreement under the Amended and Restated 2013 Equity Incentive Plan of the Registrant</a>	8-K	001-36517	10.1	December 16, 2016	
10.18†	<a href="#">Form of Option Grant Agreement under the Amended and Restated 2013 Equity Incentive Plan</a>	10-K	001-36517	10.36	March 13, 2017	
10.19	<a href="#">Amendment No. 1 to Co-Development and License Agreement dated June 13, 2017, by and between the Registrant and Janssen Pharmaceutica NV</a>	8-K	001-36517	10.1	June 14, 2017	
10.20*	<a href="#">Commercial Supply Agreement by and between the Registrant and Catalent Germany Schorndorf GmbH, dated September 18, 2019</a>	10-Q	001-36517	10.1	November 4, 2019	
10.21	<a href="#">Open Market Sale Agreement, dated as of September 14, 2022, by and between the Registrant and Jefferies LLC</a>	S-3	333-267424	1.2	September 14, 2022	
10.22	<a href="#">Settlement Agreement, dated as of June 24, 2020, by and between the Registrant and Janssen Pharmaceutica, N.V.</a>	10-Q	001-36517	10.2	August 3, 2020	
10.23†	<a href="#">Amended and Restated 2013 Equity Incentive Plan</a>	10-Q	001-36517	10.3	August 3, 2020	

<u>Exhibit No.</u>	<u>Description of Exhibit</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed Herewith</u>
10.24*	<a href="#">Royalty Purchase Agreement, dated as of January 15, 2021, by and between the Registrant and RPI 2019 Intermediate Finance Trust (redacted)</a>	10-K	001-36517	10.48	March 8, 2021	
10.25*	<a href="#">Remy Luthringer Supplemental Retention Benefits Letter Agreement (redacted)</a>	10-Q	001-36517	10.1	May 12, 2021	
10.26	<a href="#">First Amendment to the Employment Agreement of Geoff Race by and between Mind-NRG SARL and Geoff Race, effective October 11, 2021</a>	8-K	001-36517	10.1	October 12, 2021	
10.27	<a href="#">Amended and Restated Employment Agreement by and between Minerva Neurosciences, Inc. and Frederick Ahlholm, effective October 11, 2021</a>	8-K	001-36517	10.2	October 12, 2021	
10.28	<a href="#">First Amendment to the Employment Agreement of Remy Luthringer by and between Mind-NRG SARL and Remy Luthringer, effective December 13, 2022</a>	8-K	001-36517	10.1	December 13, 2022	
10.29	<a href="#">Second Amendment to the Employment Agreement of Remy Luthringer by and between Mind-NRG SARL and Remy Luthringer, effective March 6, 2023</a>	10-K	001-36517	10.30	March 8, 2023	
21.1	<a href="#">List of Subsidiaries</a>	10-K	001-36517	21.1	March 1, 2022	
23.1	<a href="#">Consent of Deloitte &amp; Touche, LLP, independent registered public accounting firm</a>	10-K	001-36517	23.1	March 8, 2023	
24.1	<a href="#">Power of Attorney (included on the Signature page of this Annual Report on Form 10-K)</a>	10-K	001-36517	24.1	March 8, 2023	
31.1	<a href="#">Certification of Chief Executive Officer (Principal Executive Officer) pursuant to Section 302 of Sarbanes-Oxley Act of 2002</a>	10-K	001-36517	31.1	March 8, 2023	
31.2	<a href="#">Certification of Chief Financial Officer (Principal Financial Officer) pursuant to Section 302 of Sarbanes-Oxley Act of 2002</a>	10-K	001-36517	31.2	March 8, 2023	

<u>Exhibit No.</u>	<u>Description of Exhibit</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed Herewith</u>
31.3	<a href="#">Certification of Chief Executive Officer (Principal Executive Officer) pursuant to Section 302 of Sarbanes-Oxley Act of 2002</a>					X
31.4	<a href="#">Certification of Chief Financial Officer (Principal Financial Officer) pursuant to Section 302 of Sarbanes-Oxley Act of 2002</a>					X
32.1**	<a href="#">Certification of Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer) pursuant to Section 906 of Sarbanes-Oxley Act of 2002</a>	10-K	001-36517	32.1	March 8, 2023	
101.INS	Inline XBRL Instance Document					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					X

† Indicates management contract or compensatory plan or arrangement.

\* Certain portions of this exhibit (indicated by asterisks) have been omitted because they are both not material and are the type that the Registrant treats as private or confidential.

\*\* These certifications are being furnished solely to accompany this annual report pursuant to 18 U.S.C. Section 1350, and are not being filed for purposes of Section 18 of the Securities Exchange Act of 1934 and are not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

The agreements and other documents filed as exhibits to this Annual Report on Form 10-K are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by us in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**MINERVA NEUROSCIENCES, INC.**

By:                     /s/ Remy Luthringer, Ph.D.                      
Remy Luthringer, Ph.D.  
Executive Chairman and  
Chief Executive Officer  
(Principal Executive Officer)

Date: April 20, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>                    /s/ Remy Luthringer, Ph.D.                    </u> Remy Luthringer, Ph.D.	Executive Chairman and Chief Executive Officer <i>(Principal Executive Officer)</i>	April 20, 2023
<u>                    /s/ Frederick Ahlholm                    </u> Frederick Ahlholm	Chief Financial Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>	April 20, 2023
<u>                    /s/ Geoffrey Race                    </u> Geoffrey Race	President	April 20, 2023
<u>                    /s/ William F. Doyle                    </u> William F. Doyle	Member of the Board of Directors	April 20, 2023
<u>                    /s/ Hans Peter Hasler                    </u> Hans Peter Hasler	Member of the Board of Directors	April 20, 2023
<u>                    /s/ Jeryl Hilleman                    </u> Jeryl Hilleman	Member of the Board of Directors	April 20, 2023
<u>                    /s/ David Kupfer, M.D.                    </u> David Kupfer, M.D.	Member of the Board of Directors	April 20, 2023
<u>                    /s/ Fouzia Laghrissi-Thode, M.D.                    </u> Fouzia Laghrissi-Thode, M.D.	Member of the Board of Directors	April 20, 2023
<u>                    /s/ Jan van Heek                    </u> Jan van Heek	Member of the Board of Directors	April 20, 2023

## CERTIFICATIONS

I, Remy Luthringer, certify that:

1. I have reviewed this Amendment No. 1 to the Annual Report on Form 10-K of Minerva Neurosciences, Inc.; and
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: April 20, 2023

/s/ Remy Luthringer, Ph.D.

Remy Luthringer, Ph.D.  
Executive Chairman and  
Chief Executive Officer  
(Principal Executive Officer)



