

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

SCHEDULE 14A INFORMATION

**Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934
(Amendment No.)**

Filed by the Registrant Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

MINERVA NEUROSCIENCES, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

MINERVA NEUROSCIENCES, INC.
1601 Trapelo Road
Suite 286
Waltham, MA 02451

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

To Be Held On May 31, 2019

Dear Stockholder:

You are cordially invited to attend the Annual Meeting of Stockholders of Minerva Neurosciences, Inc., a Delaware corporation, referred to hereafter as the "Company," "we," "us," and "Minerva." The meeting will be held on Friday, May 31, 2019 at 8:00 a.m. Eastern time at the offices of Cooley LLP, 500 Boylston Street, 14th floor, Boston, MA 02116 for the following purposes:

1. To elect the Board of Directors' nominees, Dr. Remy Luthringer, Dr. Fouzia Laghrissi-Thode and Jeryl Lynn Hilleman, to the Board of Directors to hold office until the 2022 Annual Meeting of Stockholders.
2. To ratify the selection by the Audit Committee of the Board of Directors of Deloitte & Touche LLP as the independent registered public accounting firm of the Company for its fiscal year ending December 31, 2019.
3. To conduct any other business properly brought before the meeting.

These items of business are more fully described in the Proxy Statement accompanying this Notice.

The record date for the Annual Meeting is April 5, 2019. Only stockholders of record at the close of business on that date may vote at the meeting or any adjournment thereof.

By Order of the Board of Directors

/s/ Devin Smith

Devin Smith
Corporate Secretary

Waltham, Massachusetts
April 17, 2019

You are cordially invited to attend the Annual Meeting in person. Whether or not you expect to attend the Annual Meeting, please vote over the telephone or Internet, or, if you receive a paper proxy card by mail, by completing and returning the proxy card mailed to you as promptly as possible in order to ensure your representation at the Annual Meeting. Voting instructions are provided in the Notice of Internet Availability of Proxy Materials or, if you receive a paper proxy card by mail, the instructions are printed on your proxy card and included in the accompanying Proxy Statement. Even if you have voted by proxy, you may still vote in person if you attend the Annual Meeting. Please note, however, that if your shares are held of record by a broker, bank, or other nominee and you wish to vote at the Annual Meeting, you must obtain a proxy issued in your name from that record holder.

MINERVA NEUROSCIENCES, INC.
1601 Trapelo Road
Suite 286
Waltham, MA 02451

**PROXY STATEMENT
FOR THE 2019 ANNUAL MEETING OF STOCKHOLDERS**

To Be Held On May 31, 2019

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

Why did I receive a notice regarding the availability of proxy materials on the Internet?

Pursuant to rules adopted by the Securities and Exchange Commission, or the SEC, we have elected to provide access to our proxy materials over the Internet. Accordingly, we have sent you a Notice of Internet Availability of Proxy Materials, or the Notice, because the Board of Directors of the Company, or the Board, is soliciting your proxy to vote at the 2019 Annual Meeting of Stockholders, or the Annual Meeting, including at any adjournments or postponements of the meeting. The Notice contains instructions about how to access our proxy materials online and vote online. All stockholders will have the ability to access the proxy materials at the website referred to in the Notice or request to receive a printed set of the proxy materials, including a proxy card. Instructions on how to request a printed copy of the proxy materials may be found in the Notice.

We intend to mail the Notice on or about April 17, 2019 to all stockholders of record entitled to vote at the Annual Meeting.

Will I receive any other proxy materials by mail?

We may send you a proxy card, along with a second Notice, on or after April 29, 2019.

How do I attend the Annual Meeting?

The meeting will be held on Friday, May 31, 2019 at 8:00 a.m. Eastern time at the offices of Cooley LLP, 500 Boylston Street, 14th floor, Boston, MA 02116. Information on how to vote in person at the Annual Meeting is discussed below.

Who can vote at the Annual Meeting?

Only stockholders of record at the close of business on April 5, 2019 are entitled to vote at the Annual Meeting. On this record date, there were 39,025,471 shares of common stock outstanding and entitled to vote.

Stockholder of Record: Shares Registered in Your Name

If on April 5, 2019 your shares were registered directly in your name with our transfer agent, Computershare Trust Company, N.A., then you are a stockholder of record. As a stockholder of record, you may vote in person at the meeting, vote by proxy by completing and returning a proxy card, or voting over the telephone or the Internet. Whether or not you plan to attend the meeting, we urge you to vote by completing and returning a proxy card or by voting over the telephone or Internet to ensure your vote is counted.

Beneficial Owner: Shares Registered in the Name of a Broker or Bank

If on April 5, 2019 your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in "street name" and the

Notice is being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your broker or other agent regarding how to vote the shares in your account. You are also invited to attend the Annual Meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the meeting unless you request and obtain a valid proxy from your broker or other agent.

What am I voting on?

There are two matters scheduled for a vote:

- Election of three directors (Proposal 1); and
- Ratification of the selection by the Audit Committee of the Board of Deloitte & Touche LLP as the independent registered public accounting firm of the Company for its fiscal year ending December 31, 2019 (Proposal 2).

What if another matter is properly brought before the meeting?

The Board knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

How do I vote?

You may either vote “For” the nominees to the Board or you may “Withhold” your vote for such nominees. For the other items of business, you may vote “For” or “Against” or abstain from voting.

The procedures for voting are as follows:

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record, you may vote in person at the Annual Meeting, vote by proxy over the telephone or Internet, or vote by proxy using a proxy card that you may request or that we may elect to deliver at a later time. Whether or not you plan to attend the meeting, we urge you to vote by completing and returning a proxy card or by voting over the telephone or Internet to ensure your vote is counted. You may still attend the meeting and vote in person even if you have already voted by proxy.

- To vote in person, come to the Annual Meeting and we will give you a ballot when you arrive.
- To vote using the proxy card, simply complete, sign and date the proxy card that you may request or that we may elect to deliver, and return it promptly in the envelope provided. If you return your signed proxy card to us before the Annual Meeting, we will vote your shares as you direct.
- To vote through the Internet, go to www.proxyvote.com to complete an electronic proxy card. You will be asked to provide the Company number and control number from the Notice. Your Internet vote must be received by 11:59 p.m. Eastern time on May 30, 2019 to be counted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If you are a beneficial owner of shares registered in the name of your broker, bank, or other agent, you should have received a notice containing voting instructions from that organization rather than from the Company. Simply follow the voting instructions in such notice to ensure that your vote is counted. To vote in person at the Annual Meeting, you must obtain a valid proxy from your broker, bank or other agent.

How many votes do I have?

On each matter to be voted upon, you have one vote for each share of common stock you own as of April 5, 2019.

What happens if I do not vote?*Stockholder of Record: Shares Registered in Your Name*

If you are a stockholder of record and do not vote by completing and returning a proxy card or voting over the telephone or the Internet, or in person at the Annual Meeting, your shares will not be voted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If you are a beneficial owner and do not instruct your broker, bank or other nominee how to vote your shares, the question of whether your broker, bank or nominee will still be able to vote your shares depends on whether the particular proposal is a “routine” matter. Brokers, banks and nominees can use their discretion to vote “uninstructed” shares with respect to matters that are considered to be “routine,” but not with respect to “non-routine” matters. Under the rules and interpretations of various national and regional securities exchanges, “non-routine” matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals, elections of directors (even if not contested), executive compensation (including any advisory stockholder votes on executive compensation and on the frequency of stockholder votes on executive compensation), and certain corporate governance proposals, even if management-supported. Accordingly, your broker, bank or nominee may not vote your shares on Proposal 1 without your instructions, but may vote your shares on Proposal 2 even in the absence of your instruction.

What if I return a proxy card or otherwise vote but do not make specific choices?

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, “For” the election of the nominees to the Board and “For” the ratification of Deloitte & Touche LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2019. If any other matter is properly presented at the meeting, your proxyholder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

Who is paying for this proxy solicitation?

We will pay for the entire cost of soliciting proxies. In addition to these proxy materials, our directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

What does it mean if I receive more than one Notice?

If you receive more than one Notice, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on each Notice to ensure that all of your shares are voted.

Can I change my vote after submitting my proxy?*Stockholder of Record: Shares Registered in Your Name*

Yes. You can revoke your vote at any time before the final vote at the meeting. If you are the record holder of your shares, you may revoke your vote in any one of the following ways:

- You may submit another properly completed proxy card with a later date.
- You may subsequently vote by telephone or through the Internet.

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- You may send a timely written notice that you are revoking your vote to the Company's Corporate Secretary at Minerva Neurosciences, Inc., 1601 Trapelo Road, Suite 286, Waltham, MA 02451.
 - You may attend the Annual Meeting and vote in person. Simply attending the meeting will not, by itself, revoke your vote.

Your most current proxy card or telephone or Internet vote is the one that is counted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If your shares are held by a broker, bank or other nominee, you should follow the instructions provided by your broker, bank or nominee.

When are stockholder proposals and director nominations due for next year's annual meeting?

To be considered for inclusion in next year's proxy materials, your proposal must be submitted in writing by December 19, 2019, to the Company's Corporate Secretary at Minerva Neurosciences, Inc., 1601 Trapelo Road, Suite 286, Waltham, MA 02451, and you must comply with all applicable requirements of Rule 14a-8 promulgated under the Securities Exchange Act of 1934, as amended, or the Exchange Act; provided, however, that if our 2020 Annual Meeting of Stockholders is held before May 1, 2020 or after June 30, 2020, then the deadline is a reasonable amount of time prior to the date we begin to print and mail our proxy materials for the 2020 Annual Meeting of Stockholders.

Pursuant to our Bylaws, if you wish to bring a proposal before the stockholders or nominate a director at the 2020 Annual Meeting of Stockholders, but you are not requesting that your proposal or nomination be included in next year's proxy materials, you must notify our Corporate Secretary, in writing, not later than the close of business on March 2, 2020 nor earlier than the close of business on February 1, 2020; provided, however, if our 2020 Annual Meeting of Stockholders is not held between May 1, 2020 and June 30, 2020, to be timely, notice by the stockholder must be received not earlier than the 15th day following the day on which public announcement of the date of the 2020 Annual Meeting of Stockholders is first made. You are also advised to review our Bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations.

How are votes counted?

Votes will be counted by the inspector of election appointed for the meeting, who will separately count, for the proposal to elect directors, votes "For," "Withhold," and broker non-votes; and, with respect to the other proposal, votes "For" and "Against," abstentions and, if applicable, broker non-votes. Abstentions will be counted towards the vote total for Proposals 2, and will have the same effect as "Against" votes. Broker non-votes will not be counted towards the vote total for any proposal.

What are "broker non-votes"?

As discussed above, when a beneficial owner of shares held in "street name" does not give instructions to the broker, bank or nominee holding the shares as to how to vote on matters deemed to be "non-routine," the broker, bank or nominee cannot vote the shares. These unvoted shares are counted as "broker non-votes." Proposal 1 is considered to be "non-routine" and we therefore expect broker non-votes to exist in connection with those proposals.

How many votes are needed to approve each proposal?

- For Proposal 1, the election of directors, the three nominees receiving the most "For" votes from the holders of shares present in person or represented by proxy and entitled to vote on the election of directors will be elected. Only votes "For" or "Withheld" will affect the outcome. Broker non-votes will have no effect.

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- To be approved, Proposal 2, ratification of the selection of Deloitte & Touche LLP as the Company's independent registered public accounting firm for fiscal year ending December 31, 2019, must receive "For" votes from the holders of a majority of shares present in person or represented by proxy and entitled to vote on the matter. If you "Abstain" from voting, it will have the same effect as an "Against" vote.

What is the quorum requirement?

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding at least a majority of the outstanding shares entitled to vote are present at the meeting in person or represented by proxy. On the record date, there were 39,025,471 shares outstanding and entitled to vote. Thus, the holders of 19,512,736 shares must be present in person or represented by proxy at the meeting to have a quorum.

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank or other nominee) or if you vote in person at the meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, the holders of a majority of shares present at the meeting in person or represented by proxy may adjourn the meeting to another date.

How can I find out the results of the voting at the Annual Meeting?

Preliminary voting results will be announced at the Annual Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file within four business days after the Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

PROPOSAL 1
ELECTION OF DIRECTORS

Our Board is divided into three classes. Each class consists, as nearly as possible, of one-third of the total number of directors, and each class has a three-year term. Vacancies on the Board may be filled by persons elected by a majority of the remaining directors. A director elected by the Board to fill a vacancy in a class, including vacancies created by an increase in the number of directors, shall serve for the remainder of the full term of that class and until the director's successor is duly elected and qualified. If, at the time of filling any vacancy, the directors then in office constitute less than a majority of the whole Board, upon application of any stockholder(s) holding at least ten percent of the total number of the shares at the time outstanding having the right to vote for such directors, the Delaware Court of Chancery may order an election be held to fill such vacancies or to replace the directors chosen by the directors then in office.

The Board presently has seven members. There are three directors in the class whose term of office expires on the date of the Annual Meeting. Each of the three nominees listed below is currently a director of the Company. If elected at the Annual Meeting, each of these nominees would serve until the 2022 Annual Meeting and until his or her successor has been duly elected and qualified, or, if sooner, until the director's death, resignation, or removal. It is the Company's policy to encourage directors and nominees for director to attend the Annual Meeting. All six of our directors serving at the time of our 2018 Annual Meeting of Stockholders attended that meeting either by teleconference or in person.

Directors are elected by a plurality of the votes of the holders of shares present in person or represented by proxy and entitled to vote on the election of directors. Shares represented by executed proxies will be voted, if the authority to do so is not withheld, for the election of the three nominees named below. If any nominee becomes unavailable for election as a result of an unexpected occurrence, shares that would have been voted for that nominee will instead be voted for the election of a substitute nominee proposed by the Board. Each nominee has agreed to serve if elected. The Company's management has no reason to believe that any of the nominees will be unable to serve.

The following is a brief biography of each nominee for re-election and each director whose term will continue after the Annual Meeting:

NOMINEES FOR ELECTION FOR A THREE-YEAR TERM EXPIRING AT THE 2022 ANNUAL MEETING

Jeryl Hilleman, age 61, has served on our Board since July 2018. Ms. Hilleman has served as Chief Financial Officer of Intersect ENT, Inc., a Nasdaq-listed medical device company, since June 2014. From September 2013 to May 2014, Ms. Hilleman served as Chief Financial Officer and Secretary of Ocera Therapeutics, Inc. ("Ocera"), a biopharmaceutical company, where she was responsible for managing Ocera's financial and accounting operations. From 2012 to 2013, Ms. Hilleman provided independent financial and strategic consulting for biotech and cleantech companies. From January 2008 to May 2012, she served as Chief Financial Officer of Amyris, Inc., a multinational, renewable products company based in California and Brazil, where she was responsible for managing financial and accounting operations. From January 2005, Ms. Hilleman served as a member of the Board of Directors of Xenoport, Inc., a publicly-held biopharmaceutical company, until it was acquired in July 2016. Since July 2018, Ms. Hilleman has served as a director of Novocure Ltd., a commercial stage Nasdaq-listed oncology company. Ms. Hilleman holds an A.B. from Brown University and an M.B.A. from the Wharton Graduate School of Business. 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. Remy Luthringer, age 58, 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 serves as an advisor to Medicxi Ventures, formerly Index Ventures Life Sciences, and previously served as an advisor to Index Ventures and as Chief Medical Officer to Index Life VI, a biotechnology fund raised by Index Ventures. 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.

Dr. Fouzia Laghrissi-Thode, age 56, 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. She is currently 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 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.

**THE BOARD RECOMMENDS
A VOTE IN FAVOR OF EACH NAMED NOMINEE.**

DIRECTORS CONTINUING IN OFFICE UNTIL THE 2020 ANNUAL MEETING

Dr. David Kupfer, age 78, has served on our Board since he was elected by the Board in 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, or 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.

Jan van Heek, age 69, has served on our Board since July 2014. Since 2009, Mr. van Heek has been a Principal and Partner at BioPoint Group, a business development consulting company, where he advises biotechnology and other healthcare companies in commercial strategy development, financing, and business development. He is also currently a board member of Amarin Corporation, a publicly traded biopharmaceutical company. 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.

DIRECTORS CONTINUING IN OFFICE UNTIL THE 2021 ANNUAL MEETING

William F. Doyle, age 56, 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 2004, Mr. Doyle has 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. Mr. Doyle is currently the executive chairman of BlinkHealth LLC, an online pharmacy and is also the Managing Director of WFD Ventures LLC, a private venture capital firm. 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, age 63, has served on our Board since December 2017. Mr. Hasler is Founder and Chief Executive Officer of Vicarius Pharma AG, a privately held company that provides 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 is Chairman of the Board of HBM Healthcare Investments AG in Switzerland. Since September 2018, Mr. Hasler has been a director of Shield Therapeutics, an AIM-listed specialty-pharma company and since June 2009, he has served as a director of HBM Healthcare Investments, an investment company a listed on SIX Swiss Exchange. 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.

INFORMATION REGARDING THE BOARD AND CORPORATE GOVERNANCE

INDEPENDENCE OF THE BOARD

As required under the Nasdaq Stock Market, or Nasdaq, listing standards, a majority of the members of a listed company's board of directors must qualify as "independent," as affirmatively determined by the board of directors. The Board consults with the Company's counsel to ensure that the Board's determinations are consistent with relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent listing standards of Nasdaq, as in effect from time to time.

Consistent with these considerations, after review of all relevant identified transactions or relationships between each director, or any of his or her family members, and the Company, its senior management and its independent auditors, the Board has affirmatively determined that the following directors are independent directors within the meaning of the applicable Nasdaq listing standards and our Corporate Governance Guidelines: William F. Doyle, Jan van Heek, Hans Peter Hasler, Jeryl Hilleman, Dr. David Kupfer, and Dr. Fouzia Laghrissi-Thode. In making this determination, the Board found that none of these directors or nominees for director had a material or other disqualifying relationship with the Company. Dr. Luthringer is not considered independent because he is an executive officer of the Company.

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

BOARD LEADERSHIP STRUCTURE

The Company's Board of Directors is currently chaired by the Chief Executive Officer of the Company, Dr. Luthringer. The Board has also appointed Mr. Doyle as lead independent director.

The Company believes that combining the positions of Chief Executive Officer and Board Chair helps to ensure that the Board and management act with a common purpose and provides a single, clear chain of

command to execute the Company's strategic initiatives and business plans. In addition, the Company believes that a combined Chief Executive Officer/Board Chair is better positioned to act as a bridge between management and the Board, facilitating the regular flow of information. The Company also believes that it is advantageous to have a Board Chair with an extensive history with and knowledge of the Company (as is the case with the Company's Chief Executive Officer).

The Board appointed Mr. Doyle as the lead independent director to help reinforce the independence of the Board as a whole. The position of lead independent director has been structured to serve as an effective balance to a combined Chief Executive Officer/Board Chair: the lead independent director is empowered to, among other duties and responsibilities, approve agendas and meeting schedules for regular Board meetings, preside over Board meetings in the absence of the Chair, preside over and establish the agendas for meetings of the independent directors, act as liaison between the Chair and the independent directors, approve information sent to the Board, preside over any portions of Board meetings at which the evaluation or compensation of the Chief Executive Officer is presented or discussed and, as appropriate upon request, act as a liaison to shareholders. In addition, it is the responsibility of the lead independent director to coordinate between the Board and management with regard to the determination and implementation of responses to any problematic risk management issues. As a result, the Company believes that the lead independent director can help ensure the effective independent functioning of the Board in its oversight responsibilities. In addition, the Company believes that the lead independent director is better positioned to build a consensus among directors and to serve as a conduit between the other independent directors and the Board Chair, for example, by facilitating the inclusion on meeting agendas of matters of concern to the independent directors. In light of the Chief Executive Officer's extensive history with and knowledge of the Company, and because the Board's lead independent director is empowered to play a significant role in the Board's leadership and in reinforcing the independence of the Board, the Company believes that it is advantageous for the Company to combine the positions of Chief Executive Officer and Board Chair.

ROLE OF THE BOARD IN RISK OVERSIGHT

One of the Board's key functions is informed oversight of our risk management process. The Board does not have a standing risk management committee, but rather administers this oversight function directly through the Board as a whole, as well as through various standing Board committees that address risks inherent in their respective areas of oversight. In particular, our Board is responsible for monitoring and assessing strategic risk exposure, including a determination of the nature and level of risk appropriate for us. Our Audit Committee has the responsibility to review and discuss with management, as appropriate, our guidelines and policies with respect to risk assessment and risk management, including our major financial risk exposures and the steps taken by management to monitor and control these exposures. Our Nominating and Corporate Governance Committee is responsible for developing our corporate governance principles, and periodically reviews these principles and their application. Our Compensation Committee reviews our practices and policies of employee compensation as they relate to risk management and risk-taking incentives, to determine whether such compensation policies and practices are reasonably likely to have a material adverse effect on us.

MEETINGS OF THE BOARD

The Board met five times during the last fiscal year. Each Board member attended 75% or more of the aggregate number of meetings of the Board and of the committees on which he or she served, held during the portion of the last fiscal year for which he or she was a director or committee member, except for Mr. Doyle who was unable to attend one meeting of the Compensation Committee and three meetings of the Audit Committee due to prior international travel commitments.

INFORMATION REGARDING COMMITTEES OF THE BOARD

The Board has three committees: an Audit Committee, a Compensation Committee, and a Nominating and Corporate Governance Committee. The following table provides membership and meeting information for the fiscal year ended December 31, 2018 for each of the Board committees:

<u>Name</u>	<u>Audit</u>	<u>Compensation</u>	<u>Nominating and Corporate Governance</u>
Dr. Remy Luthringer			
William F. Doyle	X	X*(1)	
Jan van Heek	X*		
Hans Peter Hasler		X	X
Jeryl Hilleman	X(2)		
Dr. Fouzia Laghrissi-Thode	X	X	
Dr. David Kupfer			X*
Total meetings in 2018 fiscal year	4	3	1

* Committee Chairperson

- (1) Mr. Doyle was appointed to serve on our Compensation Committee on March 7, 2018.
- (2) Ms. Hilleman joined our Board on July 16, 2018 and was appointed to serve on our Audit Committee on September 7, 2018.

Below is a description of each committee of the Board.

Each of the committees has authority to engage legal counsel or other experts or consultants, as it deems appropriate to carry out its responsibilities. The Board has determined that each member of each committee meets the applicable Nasdaq rules and regulations regarding "independence," and each member is free of any relationship that would impair his or her individual exercise of independent judgment with regard to the Company.

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 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. In 2018, the Audit Committee met four times.

The Audit Committee is currently composed of three directors: Mr. Doyle, Mr. van Heek and Ms. Hilleman. After her appointment to the Board on July 16, 2018, Ms. Hilleman was elected to replace Dr. Laghrissi-Thode as a member of the Audit Committee on September 7, 2018. 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 Nasdaq listing standards definition of independence for Audit Committee members on an annual basis and has determined that Messrs. van Heek and Doyle and Ms. Hilleman 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 Mr. van Heek and Ms. Hilleman qualify as “audit committee financial experts,” as defined in applicable SEC rules. The Board made a qualitative assessment of each of Mr. van Heek’s and Ms. Hilleman’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.

Report of the Audit Committee of the Board⁽¹⁾

The Audit Committee has reviewed and discussed the audited consolidated financial statements for the fiscal year ended December 31, 2018 with the management of the Company. The Audit Committee has discussed with the independent registered public accounting firm the matters required to be discussed by Auditing Standard No. 16, *Communications with Audit Committees*, as adopted by the Public Company Accounting Oversight Board, or PCAOB. The Audit Committee has also received the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the PCAOB regarding the independent registered public accounting firm’s communications with the Audit Committee concerning independence and has discussed with the independent registered public accounting firm the accounting firm’s independence. Based on the foregoing, the Audit Committee recommended to the Board that the audited consolidated financial statements be included in the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

Respectfully submitted,
The Audit Committee of the Board of Directors

Mr. Jan van Heek, Chair
Mr. William F. Doyle
Ms. Jeryl Hilleman

-
- (1) The material in this report is not “soliciting material,” is not deemed “filed” with the Commission and is not to be incorporated by reference in 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.

Compensation Committee

The Compensation Committee is composed of three directors: Mr. Doyle, Dr. Laghrissi-Thode and Mr. Hasler. Mr. Doyle was appointed as Chair of the Compensation Committee on March 7, 2018 to fill a vacancy caused by the resignation of Marc Beer. All members of the Company’s Compensation Committee are independent (as independence is currently defined in Rule 5605(d)(2)(A) of the Nasdaq listing standards). The Board has adopted a written Compensation Committee charter that is available on the Company’s website at <http://ir.minervaneurosciences.com/corporate-governance>.

The Compensation Committee of the Board acts on behalf of the Board to review, adopt, and oversee the Company’s compensation strategy, policies, plans and programs, including: to establish corporate and individual performance objectives relevant to the compensation of the Company’s executive officers; to review and approve of the compensation and other terms of employment of the Company’s Chief Executive Officer and other executive officers; to review and adopt or make recommendations to the Board in respect of any employment agreements or severance or change-in-control arrangements for the Company’s Chief Executive Officer and other

executive officers; to administer the Company's incentive and equity-based compensation plans; to review and recommend to the Board a succession plan for the Company's Chief Executive Officer and other executive officers; and to review the compensation of the Company's non-employee directors and recommend any proposed changes to the Board.

In addition, the Board has also determined that each member of the Compensation Committee is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act and an "outside director" as that term is defined in Section 162(m) of the Internal Revenue Code of 1986, as amended.

Compensation Committee Processes and Procedures

Typically, the Compensation Committee meets at least twice annually, and with greater frequency if necessary. The agenda for each meeting is usually developed by the Chair of the Compensation Committee, in consultation with the Chief Executive Officer and the Chief Financial Officer. The Compensation Committee meets regularly in executive session. However, from time to time, various members of management and other employees as well as outside advisors or consultants may be invited by the Compensation Committee to make presentations, to provide financial or other background information or advice, or to otherwise participate in Compensation Committee meetings. The Chief Executive Officer may not participate in, or be present during, any deliberations or determinations of the Compensation Committee regarding his compensation. The Compensation Committee has full access to all books, records, facilities, and personnel of the Company. In addition, under its charter, the Compensation Committee has the authority to obtain, at the expense of the Company, advice and assistance from internal and external legal, accounting, or other advisors and other external resources that the Compensation Committee considers necessary or appropriate in the performance of its duties. The Compensation Committee has direct responsibility for the oversight of the work of any advisors engaged for the purpose of advising the Committee. In particular, the Compensation Committee has the sole authority to retain compensation consultants to assist in its evaluation of executive and director compensation, including the authority to approve the consultant's reasonable fees and other retention terms. Under its charter, the Compensation Committee may select, or receive advice from, a compensation consultant, legal counsel, or other advisor to the compensation committee, other than in-house legal counsel and certain other types of advisors, only after taking into consideration six factors, prescribed by the SEC and Nasdaq, that bear upon the advisor's independence; however, there is no requirement that any advisor be independent.

During the past fiscal year, after taking into consideration the six factors prescribed by the SEC and Nasdaq, the Compensation Committee engaged Radford as compensation consultant. The Compensation Committee requested that Radford:

- evaluate the efficacy of and assist in refining the Company's overall compensation philosophy and practices, including as related to base pay, bonus percentage, and the Company's equity incentive and long-term incentive plans, to support and reinforce the Company's long-term strategic goals; and
- review executive and outside director compensation in comparison to peer data and best market practices.

As part of its engagement, Radford reviewed a peer group of publicly traded companies in the life sciences industry at a stage of development, market capitalization, and size comparable to ours, which companies the Compensation Committee believed were generally comparable to our Company and against which the Compensation Committee believed we competed for executive talent. At the request of the Compensation Committee, Radford also conducted individual interviews with members of the Compensation Committee and senior management to learn more about the Company's business operations and strategy, key performance metrics and strategic goals, as well as the markets in which the Company competes. Radford ultimately developed broad based recommendations using benchmarks that were presented to the Compensation Committee for its consideration.

In 2014, the Board formed a Non-Senior Officer Stock Option Subcommittee, or the Subcommittee, composed of the Chief Executive Officer, to which it delegated authority to grant, without any further action required by the Board or the Compensation Committee, stock options to newly hired individuals who carry titles lower than vice president, up to a defined number of shares depending on the title of the employee. In May 2015, the Board approved an amended and restated policy for delegating authority for grants of equity awards to newly hired individuals. Under the amended and restated policy, the Subcommittee, currently composed of Dr. Luthringer, may now grant stock options to newly hired individuals who carry titles lower than senior vice president, within a designated range of shares depending on the title of the employee. The purpose of this delegation of authority is to facilitate the timely grant of options to new non-senior management employees within specified limits approved by the Board. During the fiscal year ended December 31, 2018, the Subcommittee did not exercise its authority to grant options to purchase any new non-senior officer employees.

Historically, the Compensation Committee has made most of the significant adjustments to annual compensation, determined bonus and equity awards and established new performance objectives at one or more meetings held during the first quarter of the year. However, the Compensation Committee also considers matters related to individual compensation, such as compensation for new executive hires, adjustments to the compensation of existing executives, as well as high-level strategic issues, such as the efficacy of the Company's compensation strategy, potential modifications to that strategy, and new trends, plans or approaches to compensation, at various meetings throughout the year. Generally, the Compensation Committee's process comprises two related elements: the determination of compensation levels and the establishment of performance objectives for the current year. For executives other than the Chief Executive Officer, the Compensation Committee solicits and considers evaluations and recommendations submitted by the Chief Executive Officer for the Compensation Committee's approval. In the case of the Chief Executive Officer, the evaluation of his performance is conducted by the Compensation Committee in consultation with the Board, which determines any adjustments to his compensation as well as equity awards to be granted. Some of the key factors the Compensation Committee considers in making pay decisions are as follows: historical compensation levels, relative position to the market, internal equity, individual and Company performance, strategic importance of role, and retention risk, among others. In 2018, the Compensation Committee met three times and acted three times via Unanimous Written Consent.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee of the Board is responsible for identifying candidates qualified to serve as directors of the Company (consistent with criteria approved by the Board), recommending to the Board candidates for election as directors and the composition of each of the committees of the Board, overseeing the evaluation of the Board and its committees, and developing the Company's corporate governance policies. In 2018, the Nominating and Corporate Governance Committee met once.

The Nominating and Corporate Governance Committee is composed of two directors: Dr. Kupfer and Mr. Hasler. Mr. Doyle was appointed to the Nominating and Corporate Governance Committee on December 13, 2017 and resigned on March 7, 2018. All members of the Nominating and Corporate Governance Committee are independent (as independence is currently defined in Rule 5605(a)(2) of the Nasdaq listing standards). The Board has adopted a written Nominating and Corporate Governance Committee charter that is available to stockholders on the Company's website at <http://ir.minervaneurosciences.com/corporate-governance>.

The Nominating and Corporate Governance Committee believes that candidates for director should have certain minimum qualifications, including the ability to read and understand basic financial statements, being over 21 years of age, and having the highest personal integrity and ethics. The Nominating and Corporate Governance Committee also intends to consider such factors as possessing relevant expertise upon which to be able to offer advice and guidance to management, sufficient time to devote to the affairs of the Company, demonstrated excellence in his or her field, the ability to exercise sound business judgment, and the commitment to rigorously represent the long-term interests of the Company's stockholders. However, the Nominating and

Corporate Governance Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the Board, the operating requirements of the Company and the long-term interests of stockholders. In conducting this assessment, the Nominating and Corporate Governance Committee typically considers diversity, age, skills and such other factors as it deems appropriate, given the current needs of the Board and the Company, to maintain a balance of knowledge, experience, and capability. In the case of incumbent directors whose terms of office are set to expire, the Nominating and Corporate Governance Committee reviews these directors' overall service to the Company during their terms, including the number of meetings attended, level of participation, quality of performance and any other relationships and transactions that might impair the directors' independence. In the case of new director candidates, the Nominating and Corporate Governance Committee also determines whether the nominee is independent for Nasdaq purposes, based upon applicable Nasdaq listing standards, applicable SEC rules and regulations, and the advice of counsel, if necessary. The Nominating and Corporate Governance Committee may engage, if it deems appropriate, a professional search firm to identify qualified director candidates. The Nominating and Corporate Governance Committee conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board.

The Nominating and Corporate Governance Committee will consider director candidates recommended by stockholders. The Nominating and Corporate Governance Committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether or not the candidate was recommended by a stockholder. Stockholders who wish to recommend individuals for consideration by the Nominating and Corporate Governance Committee to become nominees for election to the Board may do so by delivering a written recommendation addressed to our Corporate Secretary at 1601 Trapelo Road, Suite 286, Waltham, MA 02451.

STOCKHOLDER COMMUNICATIONS WITH THE BOARD

While the Company has not established a formal policy for stockholder communications with the Board, stockholders who wish to communicate with the Board may do so by sending written communications addressed to the Corporate Secretary of the Company at Minerva Neurosciences, Inc., 1601 Trapelo Road, Suite 286, Waltham, MA 02451.

These communications may be reviewed by one or more employees of the Company designated by the Board, who will determine whether the communication should be presented to the Board. The purpose of this screening is to allow the Board to avoid having to consider irrelevant or inappropriate communications (such as advertisements, solicitations and hostile communications). All communications directed to the Audit Committee in accordance with the Company's Whistleblower Policy that relate to questionable accounting or auditing matters involving the Company will be promptly and directly forwarded to the Audit Committee.

CODE OF ETHICS

The Company has adopted a Code of Business Conduct and Ethics, or 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.

PROPOSAL 2
RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of the Board has selected Deloitte & Touche LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019 and has further directed that the Company's management submit the selection of its independent registered public accounting firm for ratification by the stockholders at the Annual Meeting. Deloitte & Touche LLP has audited the Company's consolidated financial statements since the fiscal year ended December 31, 2011. Representatives of Deloitte & Touche LLP are expected to be present at the Annual Meeting. They will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Neither the Company's Bylaws nor other governing documents or law require stockholder ratification of the selection of Deloitte & Touche LLP as the Company's independent registered public accounting firm. However, the Audit Committee is submitting the selection of Deloitte & Touche LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain that firm. Even if the selection is ratified, the Audit Committee in its discretion may direct the appointment of different independent auditors at any time during the year if they determine that such a change would be in the best interests of the Company and its stockholders.

The affirmative vote of the holders of a majority of the shares present, in person or represented by proxy and entitled to vote on the matter at the Annual Meeting, will be required to ratify the selection of Deloitte & Touche LLP.

PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table represents aggregate fees billed to the Company for the fiscal years ended December 31, 2018 and 2017, by Deloitte & Touche LLP, the Company's principal accountant.

	Fiscal Year Ended	
	2018	2017
Audit fees(1)	\$502,500	\$519,500
Audit-related fees	—	—
Tax fees(2)	\$ —	\$ 6,226
All other fees(3)	\$ 1,895	\$ 1,895
Total fees	<u>\$504,395</u>	<u>\$527,621</u>

- (1) For both fiscal years ended December 31, 2018 and 2017, 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, 2018, audit fees also include those associated with the filing of a shelf registration statement on Form S-3, as well as the filing of two registration statements on Form S-8, and the delivery of related consents. For the fiscal year ended December 31, 2017, audit fees also include those associated with the filing of a re-sale registration statement on Form S-1, as well as the filing of two registration statements on Form S-8, and the delivery of related consents.
- (2) For fiscal year ended December 31, 2017, included in tax fees are fees for tax consulting services.
- (3) For fiscal years ended December 31, 2018 and December 31, 2017, included in all other fees are fees related to access to the Deloitte & Touche online accounting research database.

All fees described above were pre-approved by the Audit Committee.

In connection with the audit of the 2018 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.

**THE BOARD RECOMMENDS
A VOTE IN FAVOR OF PROPOSAL 2.**

EXECUTIVE OFFICERS

The following table sets forth information concerning our executive officers, including their ages as of March 31, 2019. Biographical information for our Chief Executive Officer and director, Dr. Remy Luthringer, is included above with the director biographies under the caption “Directors Continuing in Office Until the 2019 Annual Meeting.”

Name	Age	Position
Dr. Remy Luthringer	58	Chief Executive Officer and Executive Chairman of the Board of Directors
Richard Russell	55	President
Geoffrey Race	58	Executive Vice President, Chief Financial Officer and Chief Business Officer
Dr. Michael Davidson	69	Chief Medical Officer
Joseph Reilly	44	Senior Vice President and Chief Operating Officer
Frederick Ahlholm	53	Senior Vice President and Chief Accounting Officer
Dr. Jay B. Saoud	60	Senior Vice President, Head of Research and Development
Devin Smith	51	Senior Vice President, General Counsel

Richard Russell was appointed President of the Company in December 2017. Mr. Russell has more than 20 years of experience leading commercial operations, including developing and implementing sales and marketing activities for major biotechnology and pharmaceutical brands in North America and the European Union. His commercial and operational expertise encompasses a number of therapeutic areas, including CNS disorders, neurodegenerative disorders, cardiovascular disease and women’s health. Prior to joining Minerva, Mr. Russell served as President and Chief Executive Officer at Stallergenes Greer, Inc., a global pharmaceutical company. From 2011 to 2014, Mr. Russell served as Executive Vice President and Chief Commercial Officer at Sunovion, a Massachusetts pharmaceutical company. Mr. Russell has also held senior management positions at Ares Allergy Holdings, EMD Serono, Sanofi-Aventis and Novartis. Mr. Russell holds a B.A. in chemistry from Bates College and an M.S. in organic chemistry from the University of New Hampshire.

Geoffrey Race has provided services to us since July 2010, first as a consultant and then as an employee beginning in May 2014 as Executive Vice President and Chief Financial Officer. Mr. Race was named our Chief Business Officer in January 2016. 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 a Fellow of the Institute of Chartered Management Accountants and earned his M.B.A. from Durham University Business School (UK).

Dr. Michael Davidson has provided research and development consulting services to the Company since 2014 and was appointed our Chief Medical Officer effective December 2016. He is currently the director of the Stuckinski Centre for Alzheimer’s Disease Care and Research in Israel. Previously, Dr. Davidson worked in the Department of Psychiatry at the Mount Sinai School of Medicine in New York. Before joining Minerva, he also has served as the Chief Psychiatrist at the Sheba Medical Centre in Tel Aviv, Israel and as a consultant to many major pharmaceutical companies. Dr. Davidson has published over 300 articles, primarily in peer reviewed journals, in the areas of Schizophrenia and Alzheimer’s disease. Dr. Davidson previously served on the board of directors at CliniRX Tangent Research, a clinical research organization. He currently serves as an advisory board member of several professional organizations, as chief editor of a major professional journal, and as a reviewer for several other professional journals.

Joseph Reilly has served as an employee since January 2014 and was named our Chief Operating Officer in July 2014. Mr. Reilly was named Senior Vice President in May 2015. Prior to joining us, Mr. Reilly served as Vice President and Head of Commercial Strategy and Operations at Genzyme, a Sanofi pharmaceutical company, from August 2012 to December 2013. He earned his B.S. in Finance at Boston College and his M.S. in Finance from the Wallace E. Carroll Graduate School of Management at Boston College.

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 was named our Vice President and Chief Accounting Officer in July 2014 and was named Senior Vice President in May 2015. 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.

Dr. Jay B. Saoud has provided services to us since 2014, first as an employee of PPRS Research, Inc., a strategic research and development consulting partner for Minerva, and then as an employee beginning in August 2017. Before joining Minerva, Dr. Saoud was president and chief executive officer of PPRS Research, Inc., where he now serves as a part-time consultant. Since 2010, Dr. Saoud has also served as founder and general manager of Pharmaceutical Product Development Associates, LLC, a group dedicated to helping move products at various stages of drug development by creating significant incremental clinical and regulatory benefits. Dr. Saoud has more than 28 years of research and development experience in both industry and academia, where he played a critical role in the design, conduct and reporting of clinical trials across multiple therapeutic areas including CNS. Dr. Saoud has been involved in the development of more than 125 active molecules in multiple therapeutic areas. He has a record of successful pre-market and registration submissions in global regulatory jurisdictions and approval of 11 New Drug Applications (NDAs).

Devin Smith has provided services to us since July 2018. Mr. Smith has more than 19 years of legal and compliance experience serving clients in the biotechnology and pharmaceutical industries. Prior to that, Mr. Smith served as served as General Counsel and Company Secretary of Stallergenes Greer plc, a global biopharmaceutical company focused on allergy immunotherapy products, beginning in October 2015. From October 2011 until October 2015, Mr. Smith was the Vice President and General Counsel and led the North American legal department for EMD Serono, Inc., the biopharmaceutical division of Merck KGaA. From October 2006 until October 2011, he was the Associate General Counsel for EMD Serono. Prior to EMD Serono, he was a partner at the international law firm of Nixon Peabody LLP. Mr. Smith received a B.A. from the University of North Carolina-Chapel Hill and his law degree (cum laude) from Suffolk University Law School.

**SECURITY OWNERSHIP OF
CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth certain information regarding the ownership of the Company's common stock as of April 2, 2019 by: (i) each director and nominee for director; (ii) each of the executive officers named in the Summary Compensation Table; (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.

NAME	Beneficial Ownership ⁽¹⁾	
	Shares	Percentage
Named Executive Officers and Directors:		
Geoffrey Race ⁽²⁾	1,019,026	2.6%
Dr. Remy Luthringer ⁽³⁾	2,490,740	6.1%
Dr. Michael Davidson ⁽⁴⁾	141,251	*
Devin Smith	—	*
William F. Doyle ⁽⁵⁾	71,500	*
Dr. Fouzia Laghrissi-Thode ⁽⁶⁾	65,000	*
Dr. David Kupfer ⁽⁷⁾	302,123	*
Hans Peter Hasler ⁽⁸⁾	33,889	*
Jan van Heek ⁽⁹⁾	102,800	*
Jeryl Hilleman ⁽¹⁰⁾	11,111	*
All executive officers and directors as a group (14 persons)	5,104,391	12.0%
Other 5% Stockholders:		
Funds affiliated with Index Ventures ⁽¹¹⁾	4,609,189	11.8%
FMR LLC and its affiliates ⁽¹²⁾	2,809,214	7.2%
Funds affiliated with Federated Investors ⁽¹³⁾	7,535,287	19.3%
Funds affiliated with Highland Capital Management ⁽¹⁴⁾	2,160,544	5.5%
BlackRock, Inc. ⁽¹⁵⁾	2,456,902	6.3%

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

- (1) This table is based upon information supplied by officers, directors and, in the case of principal stockholders, Schedules 13D and 13G filed with the SEC or information provided by our transfer agent, Computershare Trust Company, N.A., which information may not be accurate as of April 17, 2019. The address of each executive officer and director listed on the table is c/o Minerva Neurosciences, Inc. 1601 Trapelo Road, Suite 286, Waltham, MA 02451. We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the executive officers and directors named in the table above have sole voting and investment power with respect to all shares of common stock that they beneficially own, subject to applicable community property laws. Applicable percentages are based on 39,025,471 shares outstanding on April 2, 2019, adjusted as required by rules promulgated by the SEC.
- (2) Consists of (a) 198,370 shares of common stock and (b) options to purchase 820,656 shares of common stock that are exercisable within 60 days of April 2, 2019.
- (3) Consists of (a) 926,604 shares of common stock beneficially owned by Wint2felden Holding SA, a company wholly owned by Dr. Luthringer; (b) 32,702 shares of common stock owned by Dr. Luthringer himself, and (c) options to purchase 1,531,434 shares of common stock that are exercisable within 60 days of April 2, 2019.
- (4) Consists of options to purchase 141,251 shares of common stock that are exercisable within 60 days of April 2, 2019.
- (5) Consists of (a) 22,611 shares of common stock and (b) options to purchase 48,889 shares of common stock that are exercisable within 60 days of April 2, 2019.

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- (6) Consists of options to purchase 65,000 shares of common stock that are exercisable within 60 days of April 2, 2019.
 - (7) Consists of (a) 209,188 shares of common stock, (b) 27,935 shares of common stock owned by Dr. Kupfer's spouse, and (c) options to purchase 65,000 shares of common stock that are exercisable within 60 days of April 2, 2019.
 - (8) Consists of options to purchase 33,889 shares of common stock that are exercisable within 60 days of April 2, 2019.
 - (9) Consists of (a) 3,333 shares of common stock and (b) options to purchase 99,467 shares of common stock that are exercisable within 60 days of April 2, 2019.
 - (10) Consists of options to purchase 11,111 shares of common stock that are exercisable within 60 days of April 2, 2019.
 - (11) This information is based solely on the information reported on the Schedule 13D/A filed on October 5, 2018 by Index Ventures. The number of shares beneficially owned consists of (a) 798,930 shares of common stock held by Index Ventures III (Jersey) L.P. ("IVIII Jersey"), (b) 1,622,941 shares of common stock Index Ventures III (Delaware) L.P. ("IVIII Delaware"), (c) 28,911 shares of common held by Index Ventures III Parallel Entrepreneur Fund (Jersey), L.P. ("IVPEF III" and collectively with IVIII Jersey and IVIII Delaware, the "Index III Funds"), (d) 58,515 shares of common stock held by Yucca (Jersey) SLP ("Yucca"), (e) 1,109,799 shares of common stock held by Index Ventures IV (Jersey) L.P. ("IVIV Jersey"), (f) 105,342 shares of common stock held by Index Ventures IV Parallel Entrepreneur Fund (Jersey), L.P. ("IVPEF IV" and together with IVIV Jersey, the "Index IV Funds") (g) 877,639 shares of common stock held by Index Ventures V (Jersey), L.P. ("IVV Jersey"), and (h) 7,112 shares of common stock held by Index Ventures V Parallel Entrepreneur Fund (Jersey), L.P. ("IVPEF V" and together with IVV Jersey, the "Index V Funds"). Index Venture Associates III Limited ("Index Venture III") is the general partner of each of the Index III Funds. The address of Index Venture III and the Index III Funds is at No.1 Seaton Place, St. Helier, Jersey JE4 8YJ, Channel Islands. Index Venture Associates IV Limited ("Index Venture IV") is the general partner of each of the Index IV Funds. Index Venture Associates V Limited ("Index Venture V") is the general partner of each of the Index V Funds. Yucca is a co-investment vehicle that is contractually required to mirror the investments of the Index III Funds, Index IV Funds, and Index V Funds. Yucca has sole voting and dispositive control over these shares of common stock, except that Index Venture III, Index Venture IV, and Index Venture V, affiliates of Yucca, may be deemed to share the right to direct the voting and dispositive control over the shares held by Yucca. The address of Index Venture IV, the Index IV Funds, Index Venture V, the Index Venture V Funds and Yucca is 44 Esplanade, St. Helier, Jersey JE4 9WG, Channel Islands.
 - (12) This information is based solely on the information reported on the Schedule 13G/A filed by FMR LLC and its affiliates on February 13, 2019. Consists of 2,809,214 shares of common stock. The address for FMR LLC is 245 Summer Street, Boston, Massachusetts 02110.
 - (13) This information is based solely on the information reported on the Schedule 13G/A filed by Federated Investors on February 13, 2019. Federated Investors, 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 7,535,287 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, Rhodora J. Donahue and J. Christopher Donahue act as trustees. The address of Federated Investors is Federated Investors Tower, Pittsburgh, Pennsylvania 15222.
 - (14) This information is based solely on the information reported on the Schedule 13G/A filed by Highland Capital Management on February 14, 2018 with respect to certain shares issued on the exercise of warrants to purchase common stock. The number of shares beneficially owned includes (a) 941,578 shares of common stock held by Highland Long/Short Healthcare Fund, a series of Highland Funds I, a Delaware statutory trust ("Long/Short Fund"), (b) 363,906 shares of common stock held by Highland Global

Allocation Fund, a series of Highland Funds II, a Massachusetts business trust (“Highland Global”), (c) 740,423 shares of common stock held by Highland Premier Growth Equity Fund, a series of Highland Funds II, a Massachusetts business trust, (collectively with the Long/Short Fund and “Highland Global” the “Highland Funds”), (d) 53,847 shares of common stock held by Highland Capital Management, L.P. (“Highland Capital”), and (e) 60,760 shares of Common Stock receivable by Highland Capital upon exercise of presently held warrants. Highland Capital Management Fund Advisors, L.P., a Delaware limited partnership (“Highland Fund Advisors”), as the investment advisor to the Long/Short Fund and Strand Advisors XVI, Inc., a Delaware corporation (“Strand XVI”), as the general partner of Highland Fund Advisors, may be deemed to beneficially own the shares of common stock held by the Long/Short Fund. Highland Capital Healthcare Advisors, L.P., a Delaware limited partnership (“Healthcare Advisors”), as the investment advisor to the Healthcare Funds, Highland Capital Healthcare Advisors GP, LLC, a Delaware limited liability company (“Healthcare Advisors GP”), as the general partner of Healthcare Advisors, and Highland Capital Management Services, Inc., a Delaware corporation (“Highland Services”), as the sole owner of Healthcare Advisors GP, may be deemed to beneficially own the shares of common stock held by the Healthcare Funds. James D. Dondero is the president of Highland Services, shares power to vote and dispose of all of the shares of common stock, held by the Highland Funds and Highland Capital, and thus may be deemed to beneficially own all of the shares of common stock held by the Highland Funds and Highland Capital. The address of the Highland Funds, Highland Fund Advisors, Strand XVI, Healthcare Advisors, Healthcare Advisors GP, Highland Services, Highland Capital, and James D. Dondero is 300 Crescent Court, Suite 700, Dallas, Texas 75201.

- (15) This information is based solely on the information reported on the Schedule 13G/A filed by BlackRock, Inc. on February 8, 2019. BlackRock, Inc. and/or its subsidiaries have sole voting power with respect to 2,384,947 shares of common stock and sole dispositive power with respect to 2,456,902 shares of common stock. The address of BlackRock, Inc. is 55 East 52nd Street, New York, NY 10055.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

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, 2018, all Section 16(a) filing requirements applicable to its officers, directors, and greater than ten percent beneficial owners were complied with.

EXECUTIVE AND DIRECTOR COMPENSATION

SUMMARY COMPENSATION TABLE

The following table shows for the fiscal years ended December 31, 2018 and 2017 the compensation of the Company's Chief Executive Officer and its two other most highly compensated executive officers at December 31, 2018, which we refer to as our "named executive officers."

NAME AND PRINCIPAL POSITION	YEARS	SALARY (\$)	BONUS (\$)	OPTIONS AWARDS (\$)(1)	STOCK AWARDS (\$)	ALL OTHER COMPENSATION (\$)	TOTAL (\$)
Dr. Remy Luthringer Chief Executive Officer	2018	525,000	196,875	3,185,900	—	2,470(2)	3,910,245
	2017	445,372	278,358	1,554,000	—	2,586(3)	2,280,136
Geoffrey Race Executive Vice President, Chief Financial Officer and Chief Business Officer	2018	397,000	148,875	978,250	—	3,332(4)	1,527,457
	2017	384,313	240,195	888,000	—	3,166(5)	1,515,833
Richard Russell(8) President	2018	475,000	278,125	1,453,400	—	15,045(6)	2,221,570
	2017	28,926	—	3,417,750	242,000	—	3,688,676
Devin Smith(9) Senior Vice President and General Counsel	2018	154,340	96,315	1,788,800	—	4,796(7)	2,044,251

- (1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during 2017 and 2018 computed in accordance with FASB ASC Topic 718. The assumptions we used in valuing options are described in Note 8 to our consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on March 12, 2019. 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 officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.
- (2) Represents \$2,470 paid in 2018 by the Company for Dr. Luthringer's life insurance premiums.
- (3) Represents \$2,586 paid in 2017 by the Company for Dr. Luthringer's life insurance premiums.
- (4) Represents \$3,332 paid in 2018 by the Company for Mr. Race's life insurance premiums.
- (5) Represents \$3,166 paid in 2017 by the Company for Mr. Race's life insurance premiums.
- (6) Represents \$14,631 paid in 2018 by the Company in 401(k) contributions and \$414 paid in 2018 by the Company for Mr. Russell's life insurance premiums.
- (7) Represents \$4,551 paid in 2018 by the Company in 401(k) contributions and \$245 paid in 2018 by the Company for Mr. Smith's life insurance premiums.
- (8) Mr. Russell's employment with the Company began on December 11, 2017.
- (9) Mr. Smith's employment with the Company began on July 23, 2018.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR END

The following table shows for the fiscal year ended December 31, 2018, 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 unearned shares, units or other rights that have not vested (#)	Equity incentive plan awards: Market or payout value of unearned shares, units or other rights that have not vested (\$)(11)
Dr. Remy Luthringer	441,973	—	6.00	6/29/24		
	207,869	—	6.00	6/29/24		
	349,670	49,953	5.19	4/13/25		
	205,719	80,000 ⁽¹⁾	4.71	12/03/25		
	75,000	75,000 ⁽²⁾ ₍₃₎	13.45	12/13/26		
	87,500	262,500 ⁽⁴⁾	6.10	12/12/27		
	50,000	150,000 ⁽⁵⁾	6.20	1/1/2028		
	—	410,000 ⁽⁶⁾	7.96	12/10/2028	37,500 ⁽⁹⁾	252,750
Geoffrey Race	97,143	—	6.00	6/29/24		
	249,442	—	6.00	6/29/24		
	186,491	26,642	5.19	4/13/25		
	131,250	43,750 ⁽¹⁾ ₍₂₎	4.71	12/03/25		
	50,000	100,000 ⁽³⁾	13.45	12/13/26		
	50,000	150,000 ⁽⁴⁾	6.10	12/12/27		
	—	175,000 ⁽⁶⁾	7.96	12/10/2028	25,000 ⁽⁹⁾	168,500
Richard Russell	193,750	581,250 ⁽⁷⁾	6.05	12/10/2027		
	—	260,000 ⁽⁴⁾	7.96	12/10/2028	30,000 ⁽¹⁰⁾	202,200
Devin Smith	—	200,000 ⁽⁸⁾	7.95	7/30/2028		
	—	120,000 ⁽⁴⁾	7.96	12/10/2028		

- (1) 25% of the shares subject to the option vested and became exercisable on April 14, 2016 and the balance of the shares will 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 vested and became exercisable on December 4, 2016 and the balance of the shares will 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) 25% of the shares subject to the option vested and became exercisable on December 14, 2017 and the balance of the shares will 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.
- (4) 25% of the shares subject to the option vested and became exercisable on December 13, 2018 and the balance of the shares will 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.
- (5) 25% of the shares subject to the option vested and became exercisable on December 13, 2018, 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.
- (6) 25% of the shares subject to the option will vest and become exercisable on December 11, 2019 and the balance of the shares will 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.

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- (7) 25% of the shares subject to the option vested and became exercisable on December 11, 2018, and the balance of the shares vest and become exercisable in a series of twelve equal quarterly installments upon Mr. Russell's completion of each quarter of service over the three-year period thereafter.
 - (8) 25% of the shares subject to the option will vest and become exercisable on July 23, 2019 and the balance of the shares will vest and become exercisable in a series of twelve equal quarterly installments upon Mr. Smith's completion of each quarter of service over the three-year period thereafter.
 - (9) The RSUs vest in 4 equal annual installments beginning on December 14, 2017 and will be fully vested on December 14, 2020, in all cases so long as there has been no break in the continuous service of the executive officer through such date.
 - (10) The RSUs vest in 4 equal annual installments beginning on December 11, 2017 and will be fully vested on December 11, 2020, in all cases so long as there has been no break in Mr. Russell's continuous service through such date.
 - (11) The market value is calculated based on the closing price of our common stock on December 31, 2018, or \$6.74.

ARRANGEMENTS WITH OUR NAMED EXECUTIVE OFFICERS

Each of our named executive officers is party to a written employment, offer or consulting agreement with us. Before becoming our employees, Dr. Luthringer and Mr. Race provided services to us under consulting agreements.

Dr. Remy Luthringer

We entered into an Amended and Restated Employment Agreement with Dr. Luthringer through our wholly owned subsidiary, Mind-NRG SARL, in August 2016 setting forth the terms of his employment. Dr. Luthringer's principal place of work is in Geneva, Switzerland. In 2018, Dr. Luthringer was entitled to an annual base salary of \$525,000, which increased to an annual base salary of \$543,375, starting on January 1, 2019. Dr. Luthringer is also entitled to a discretionary bonus payment for each calendar year that ends during his employment with a target annual bonus amount at 50% of his base salary for that calendar year.

Pursuant to his employment agreement, if Dr. Luthringer's employment with us ends due to his resignation for "good reason," his termination by us other than for "cause" or as a result of his death or disability, he is entitled to (1) continued payment of his base salary for twelve months following his termination, (2) a pro-rated portion of his target performance bonus for the year in which the termination occurs, and (3) vesting of his outstanding stock options as to that number of the then-unvested underlying shares of common stock that would have vested over the twelve-month period following the end of Dr. Luthringer's 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 other than for "cause," in each case in connection with or within twelve months following a change of control of our company, Dr. Luthringer will be entitled to (1) continued payment of his base salary for 24 months following his termination, (2) 100% of his target performance bonus for the year in which the termination occurs and (3) vesting of his outstanding stock options as to all then-unvested underlying shares of common stock. Dr. Luthringer's benefits are conditioned, among other things, on his complying with his post-termination obligations under his employment agreement.

For the 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) 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 the purposes of Dr. Luthringer's employment agreements, we may terminate him for "cause" if he (1) was convicted of a felony or a misdemeanor involving moral turpitude, (2) committed an act of fraud or embezzlement against us or our affiliates, (3) materially breached his employment agreement and failed to cure such breach within 30 days,

(4) materially violated any of our written policies and failed to cure such violation within 30 days, (5) materially failed or materially refused to substantially perform his duties (other than by reason of a physical or mental impairment) or to implement the lawful written directives of our Chief Executive Officer or our board of directors that are consistent with his position, and such material failure or material refusal has continued after 30 days, (6) willfully engaged in conduct or willfully omitted 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 breached 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, in August 2016 setting forth the terms of his employment. Mr. Race's principal place of work is in Cambridge, United Kingdom. In 2018, Mr. Race was entitled to an annual base salary of \$397,000, which increased to an annual base salary of \$410,900 starting on January 1, 2019. Mr. Race is also eligible to receive a discretionary bonus payment for each calendar year that ends during his employment with a target annual bonus amount at 50% of his base salary for that calendar year.

Pursuant to his employment agreement, if Mr. Race's employment with us ends due to his resignation for "good reason," his termination by us other than for "cause" or as a result of his death or disability, he is entitled to (1) continued payment of his base salary for twelve months following his termination, (2) a pro-rated portion of his target performance bonus for the year in which the termination occurs, and (3) vesting of his outstanding stock options as to that number of the then-unvested underlying shares of common stock that would have vested over the twelve-month period following the end of Mr. Race's 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 other than for "cause," in each case in connection with or within twelve months following a change of control of our company, Mr. Race will be entitled to (1) continued payment of his base salary for twelve months following his termination, (2) a severance payment of an amount equal to twelve months' of his base salary, (3) 100% of his target performance bonus for the year in which the termination occurs and (4) vesting of his outstanding stock options as to all then-unvested underlying shares of common stock. Mr. Race's benefits are conditioned, among other things, on his complying with his post-termination obligations under his employment agreement.

For the purposes of Mr. Race's employment agreement, Mr. Race may end his employment by resignation for "good reason" if, without Mr. Race's written consent, there is (1) a material diminution in the nature or scope of his responsibilities, duties or authority; (2) 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 the purposes of Mr. Race's employment agreement, we may terminate him for "cause" if he (1) was convicted of a felony or a misdemeanor involving moral turpitude, (2) committed an act of fraud or embezzlement against us or our affiliates, (3) materially breached his employment agreement and failed to cure such breach within 30 days, (4) materially violated any of our written policies and failed to cure such violation within 30 days, (5) materially failed or materially refused to substantially perform his duties (other than by reason of a physical or mental impairment) or to implement the lawful written directives of our Chief Executive Officer or our board of directors that are consistent with his position, and such material failure or material refusal has continued after 30 days, (6) willfully engaged in conduct or willfully omitted 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 breached his fiduciary duties as our officer.

Richard Russell

We entered into an Offer Letter with Mr. Russell on October 31, 2017 setting forth the terms of his employment with the Company. The Offer Letter does not provide for a specified term of employment and Mr. Russell's employment is on an at-will basis, subject to the payment of severance in certain circumstances as described below.

Under the Offer Letter, Mr. Russell was entitled to an annual base salary of \$475,000, which is subject to an annual performance review by the Compensation Committee. Beginning on January 1, 2019, Mr. Russell's annual base salary was increased to \$491,600. In addition, Mr. Russell is eligible to receive an annual discretionary performance bonus for each calendar year during which he is employed under the Offer Letter. The target amount of the performance bonus is equal to 50% of Mr. Russell's then-current base salary, with the actual bonus amount for the applicable calendar year to be recommended annually by the Compensation Committee for formal Board approval. Mr. Russell is also eligible to participate in the Company's employee benefit, welfare and other plans generally available to the other executives of the Company, as may be maintained by the Company from time to time. In addition, Mr. Russell was paid a one-time signing bonus of \$100,000.

Pursuant to the terms of the Offer Letter, if Mr. Russell is terminated by the Company for a reason other than retirement, death, disability or Cause (as defined in the Offer Letter), or if Mr. Russell terminates his employment for Good Reason (as defined in the Offer Letter), then Mr. Russell will be entitled to receive a severance payment equal to the continued payment of twelve months of Mr. Russell's annualized base salary at the time of termination. In addition, in the event of a termination by the Company for a reason other than Cause, the Company will continue to pay the pro-rata portion of his annual bonus for the year of such termination (assuming that the annual bonus is equal to 50% of his base salary at the time of termination).

In addition, pursuant to the terms of the Offer Letter, if Mr. Russell terminates his employment for any or no reason within the five (5) day period following the eighteen-month anniversary of his start date, he will be entitled to continued payment of his base salary for six (6) months. Mr. Russell is only entitled to this benefit if he has provided eighteen months of continuous service to the Company prior to resigning within the specified time period.

Furthermore, pursuant to the terms of the Offer Letter, if Mr. Russell is terminated by the Company without Cause (as defined in the Offer Letter) or if he terminates his employment for Good Reason (as defined in the Offer letter) within twelve months immediately following a Change in Control (as defined in the Offer Letter), then Mr. Russell will be entitled to receive a severance payment equal to the continued payment of eighteen months of Mr. Russell's annualized base salary at the time of termination as well as a payment equal to the full annual bonus for the performance year in which his termination occurs, payable as a lump sum.

Devin Smith

We entered into an Offer Letter with Mr. Smith on June 12, 2018 setting forth the terms of his employment with the Company. The Offer Letter does not provide for a specified term of employment and Mr. Smith's employment is on an at-will basis, subject to the payment of severance in certain circumstances as described below.

Under the Offer Letter, Mr. Smith was entitled to an annual base salary of \$350,000, which is subject to an annual performance review by the Compensation Committee. Beginning on January 1, 2019, Mr. Smith's annual base salary was increased to \$362,250. In addition, Mr. Smith is eligible to receive an annual discretionary performance bonus for each calendar year during which he is employed under the Offer Letter. The target amount of the performance bonus is equal to 40% of Mr. Smith's then-current base salary, with the actual bonus amount for the applicable calendar year to be recommended annually by the Compensation Committee for formal Board approval and which performance bonus was pro-rated for the portion of 2018 in which he was employed

by the Company. Mr. Smith is also eligible to participate in the Company's employee benefit, welfare and other plans generally available to the other executives of the Company, as may be maintained by the Company from time to time. In addition, Mr. Smith was paid a one-time signing bonus of \$50,000.

Pursuant to the terms of the Offer Letter, if Mr. Smith is terminated by the Company for a reason other than retirement, death, disability or Cause (as defined in the Offer Letter), or if Mr. Smith terminates his employment for Good Reason (as defined in the Offer Letter), then Mr. Smith will be entitled to receive a severance payment equal to the continued payment of nine months of Mr. Smith's annualized base salary at the time of termination. In addition, in the event of a termination by the Company for a reason other than Cause, the Company will continue to pay the pro-rata portion of his annual bonus for the year of such termination (assuming that the annual bonus is equal to 35% of his base salary at the time of termination).

Furthermore, pursuant to the terms of the Offer Letter, if Mr. Smith is terminated by the Company without Cause (as defined in the Offer Letter) or if he terminates his employment for Good Reason (as defined in the Offer letter) within twelve months immediately following a Change in Control (as defined in the Offer Letter), then Mr. Smith will be entitled to receive a severance payment equal to the continued payment of twelve months of Mr. Smith's annualized base salary at the time of termination as well as a payment equal to the full annual bonus for the performance year in which his termination occurs, payable as a lump sum.

Payments Upon a Change in Control

In addition to payments and benefits under their employment or consultant agreements described above, pursuant to the terms of our Amended and Restated 2013 Equity Incentive Plan, if one or more of the options 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 options would automatically accelerate and vest in full immediately prior to the change in control.

Confidentiality and Assignment Agreements

Each of the employment or offer agreements with our named executive officers contains provisions with respect to confidential information and assignment of inventions. Among other things, each agreement obligates 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.

DIRECTOR COMPENSATION

2018 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 2018. 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 2018.

Name	Fees Earned or Paid in Cash (\$)	Option Awards ⁽¹⁾ (\$)	All Other Compensation (\$)	Total (\$)
William F. Doyle	60,000	212,533	—	272,533
Hans Peter Hasler	45,000	108,133	—	153,133
Dr. David Kupfer	41,500	108,133	—	149,633
Jan van Heek	48,750	108,133	—	156,883
Dr. Fouzia Laghrissi-Thode	45,125	108,133	—	153,258
Jeryl Hilleman	17,948	223,200	—	241,148
Marc D. Beer ⁽²⁾	22,500	—	354,864 ⁽³⁾	377,364

- (1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during 2018 computed in accordance with FASB ASC Topic 718. The assumptions we used in valuing the option awards are described in Note 8 to our consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on March 12, 2019. 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 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.

As of December 31, 2018, the aggregate number of shares subject to outstanding equity awards held by our non-employee directors who served on our Board during 2018 was:

Name	Stock Options
Marc D. Beer ⁽²⁾	240,369
William F. Doyle	80,000
Hans Peter Hasler	60,000
Dr. David Kupfer	70,000
Jan van Heek	104,467
Dr. Fouzia Laghrissi-Thode	70,000
Jeryl Hilleman	40,000

- (2) Mr. Beer resigned as a member of our Board on January 31, 2018.
- (3) Represents an expense related to the acceleration of stock option awards held by Mr. Beer, which the Company approved in connection with his resignation from the Board of Directors.

Non-Employee Director Compensation Policy

Our Board adopted a Non-Employee Director Compensation Plan, or the Old Plan, for non-employee directors, which became effective on July 1, 2015. In March 2018, our Board adopted an Amended and Restated Non-Employee Director Compensation Plan, which became effective April 1, 2018 and amended and restated the Old Plan. Under the terms of the Old Plan, each non-employee director was eligible to receive an annual cash retainer of \$30,000 and the chairperson of the Board was eligible to receive an additional annual cash retainer of \$50,000. The chairpersons of the Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee were each eligible to receive additional annual cash retainers of \$15,000, \$10,000 and

\$7,000, respectively. Other members of the Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee were eligible to receive additional annual cash retainers of \$7,500, \$5,000 and \$3,500, respectively. Under the terms of the Old Plan, each newly elected non-employee member of the Board was also eligible to receive a one-time grant of an option to purchase 25,000 shares of common stock promptly following election or appointment to the Board, or the Old Director Welcome Options. The Old Director Welcome Options vested quarterly over three years, provided that the applicable non-employee director was, as of such vesting date, then a director of the Company. In addition, each non-employee director was eligible to receive an annual option grant to purchase 12,500 shares of common stock per year, or the Old Annual Grants. The Old Annual Grants vested in equal quarterly installments over one year, provided that the applicable non-employee director was, as of such vesting date, then a director of the Company.

Under the terms of the New 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 Plan, each newly elected non-employee member of the Board is also eligible to receive a one-time grant of an option to purchase 40,000 shares of common stock promptly following election or appointment to the Board, or 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, then a director of the Company. In addition, each non-employee director is eligible to receive an annual option grant to purchase 20,000 shares of common stock per year, or 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, then a director of the Company.

**TRANSACTIONS WITH RELATED PERSONS
RELATED PERSON TRANSACTIONS POLICY AND PROCEDURES**

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 the compensation agreements and other arrangements described under "Executive Compensation" and "Director Compensation" in this proxy statement and the transactions set forth below, since January 1, 2018, there has not been any transaction or series of transactions to which we were or are a party in which the amount involved exceeded or exceeds \$120,000, and in which any of our directors, executive officers or holders of more than 5% of any class of our voting securities, or any members of their immediate family, had

or will have a direct or indirect material interest. We believe the transactions set forth below were executed on terms no less favorable to us than we could have obtained from unaffiliated third parties.

Arrangement with PPRS Research, Inc.

Dr. Jay B. Saoud, the Company's 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 the last fiscal year, the Company paid PPRS Research, Inc. approximately \$5.6 million for program and project management services, including research and development services and coordination with investigators and contract research organizations.

Arrangement with V-Watch SA

We entered into an agreement, under which we will pay approximately \$380,000 to license a device for monitoring sleep from V-Watch SA, or 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.

Equity Awards

For more information regarding stock option awards granted to our named executive officers and directors, see the sections entitled "Executive Compensation — Outstanding Equity Awards at Fiscal Year End" and "Director Compensation."

Indemnification Agreements

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.

Registration Rights

Funds affiliated with Index Ventures are party to an investor rights agreement providing for rights to register under the Securities Act of 1933, as amended, certain shares of our capital stock after the expiration of the 180-day period following the completion of our IPO (as may be extended under certain circumstances).

EQUITY COMPENSATION PLAN INFORMATION

The following table provides certain information with respect to all of the Company's equity compensation plans in effect as of December 31, 2018.

Equity Compensation Plan Information

Plan Category	Number of securities to be issued upon exercise of outstanding options, stock appreciation rights, stock awards and restricted stock units (a)	Weighted-average price of outstanding options, stock appreciation rights, stock awards and restricted stock units	Number of securities remaining available for issuance under equity compensation plans ⁽¹⁾ (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	7,820,347	\$ 6.99	769,779
Equity compensation plans not approved by security holders	815,000 ⁽¹⁾	\$ 5.75	—
Total	8,625,347	\$ 6.88	769,779

- (1) Consists of 775,000 shares of common stock underlying an "inducement award" pursuant to Nasdaq Listing Rule 5635(c) in the form of a stock option award, and 40,000 shares of common stock underlying an "inducement award" pursuant to Nasdaq Listing Rule 5635(c) in the form of a restricted stock unit award, each granted to the Company's President on December 11, 2017.

HOUSEHOLDING OF PROXY MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for Notices of Internet Availability of Proxy Materials or other Annual Meeting materials with respect to two or more stockholders sharing the same address by delivering a single Notice of Internet Availability of Proxy Materials or other Annual Meeting materials addressed to those stockholders. This process, which is commonly referred to as "householding," potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are Minerva Neurosciences, Inc. stockholders will be "householding" the Company's proxy materials. A single Notice of Internet Availability of Proxy Materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be "householding" communications to your address, "householding" will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in "householding" and would prefer to receive a separate Notice of Internet Availability of Proxy Materials, please notify your broker or the Company. Direct your written request to Minerva Neurosciences, Inc. to the attention of our Corporate Secretary, 1601 Trapelo Road, Suite 286, Waltham, MA 02451, or contact our Corporate Secretary at (617) 600-7373. Stockholders who currently receive multiple copies of the Notices of Internet Availability of Proxy Materials at their addresses and would like to request "householding" of their communications should contact their brokers.

OTHER MATTERS

The Board knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

By Order of the Board

/s/ Devin Smith

Devin Smith
Corporate Secretary

April 17, 2019

A copy of the Company's Annual Report to the Securities and Exchange Commission on Form 10-K for the fiscal year ended December 31, 2018 is available without charge upon written request to: Corporate Secretary, Minerva Neurosciences, Inc., 1601 Trapelo Road, Suite 286, Waltham, MA 02451.

MINERVA NEUROSCIENCES, INC.
1601 TRAPELO ROAD, SUITE 286
WALTHAM, MA 02451

VOTE BY INTERNET - www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

E67645-P21837

KEEP THIS PORTION FOR YOUR RECORDS

DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

MINERVA NEUROSCIENCES, INC.		For All	Withhold All	For All Except	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.		
The Board of Directors recommends you vote FOR the following:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
1. Election of Directors							
Nominees:							
01) Dr. Remy Luthringer							
02) Dr. Fouzia Laghrissi-Thode							
03) Jeryl Hilleman							
The Board of Directors recommends you vote FOR the following proposal:					For	Against	Abstain
2. To ratify the appointment of Deloitte & Touche LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2019.					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NOTE: Such other business as may properly come before the meeting or any adjournment thereof.							
Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.							
<input type="text"/> Signature [PLEASE SIGN WITHIN BOX]		<input type="text"/> Date		<input type="text"/> Signature (Joint Owners)		<input type="text"/> Date	

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:
The Notice and Proxy Statement and Annual Report are available at www.proxyvote.com.

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MINERVA NEUROSCIENCES, INC.
Annual Meeting of Stockholders
May 31, 2019 8:00 AM EDT
This proxy is solicited by the Board of Directors

The stockholder(s) hereby appoint(s) Remy Luthringer and Geoffrey Race, or either of them, as proxies, each with the power to appoint his substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common Stock of MINERVA NEUROSCIENCES, INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 8:00 AM EDT on May 31, 2019, at the offices of Cooley LLP, 500 Boylston Street, 14th Floor, Boston, MA 02116-3736, and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side