

November 4, 2021

Ivana Magovevi-Liebisch, PhD, JD  
Chief Executive Officer  
Vigil Neuroscience, Inc.  
300 Technology Square, 8th Floor  
Cambridge, MA 02139

Inc.

Statement on Form S-1

8, 2021

Re: Vigil Neuroscience,

Draft Registration

Submitted October

CIK No. 0001827087

Dear Dr. Magovevi-Liebisch:

We have reviewed your draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Draft Registration Statement on Form S-1 Filed October 8, 2021

Prospectus Summary, page 3

1. We note from your disclosure on page 118 that the safety profile of VGL101 is currently being assessed in a six-month repeat-dose toxicology study in non-human primates, and from your disclosure on page 19 that you have not yet submitted an IND for VGL101. In addition, it is unclear from your current disclosure when you anticipate submitting an IND application. As such, it appears that VGL101 is still in pre-clinical development. However, the arrow in your pipeline table could suggest that you have completed pre-IND related activities for VGL101 for ALSP. Please shorten the arrow for VGL101 for ALSP to illustrate how far along you are in the Pre-IND process, as appropriate. Please also clarify in your disclosure when you anticipate submitting an IND for each indication

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shown in the pipeline table.

2. We note the inclusion of therapeutics targeted at Alzheimer's Disease under the VGL101 heading in your pipeline table. Given the limited disclosure related to this program, please explain why it is sufficiently material to your business to warrant inclusion in your pipeline table. If it is material, please expand your disclosure in the Business section to provide a more fulsome discussion of this

program, including a description of preclinical studies or development activities conducted. Alternatively, remove any programs that are not currently material from your pipeline table on pages 3 and 105.

3. We note your disclosure that pending safety results of the Phase 1 trial and discussions with the FDA, you plan to conduct a potentially registrational Phase 2/3 trial in ALSP patients. Given that you are in pre-clinical development, please revise your disclosure in an appropriate location to indicate the basis for your belief, at this time, that you may be eligible to conduct a combined Phase 2/3 registrational trial or revise your disclosure as appropriate.

Our Corporate History and Team, page 4

4. We note that you identify a "leading syndicate of investors" in your company in this section, however, some of these investors do not appear to be among the principal stockholders that are identified on page 187. Please relocate this disclosure from your prospectus summary to your "Principal Stockholder" section. We note in this regard that the identification of the pre-IPO investors in your prospectus summary may appear to suggest that potential investors in your public offering consider investments made by the pre-IPO investors as a factor in making an investment decision without knowing, among other things, the amount of each pre-IPO investor's investment in total or on a per share basis, their investment strategies or whether those investors will continue to hold their shares in the future, as some of the pre-IPO investors may not be subject to the reporting requirements of Section 16 of the Exchange Act, and investors in your public offering will not necessarily know when some of the pre-IPO investors decide to sell any of their

FirstName LastNameIvana Magovevi-Liebisch, PhD, JD  
shares. In addition to relocating this disclosure, please limit any textual description of Comapany yourNameVigil Neuroscience, pre-IPO investors in your Inc.

"Principal Stockholders" section to the investors identified in that

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Risk Factors, page 12

5. We note your disclosure on page 178 that the administrator of the 2021 Plan is specifically authorized to exercise its discretion to reduce the exercise price of outstanding stock options and stock appreciation rights or effect the repricing of such awards through cancellation and re-grants without stockholder consent. Please include appropriate risk factor disclosure, including whether proxy advisory firms could find such repricing without stockholder approval contrary to a performance-based pay philosophy.

Managment's Discussion and Analysis of Financial Condition and Results of Operations  
Critical Accounting Policies and Significant Judgements and Estimates

6. Please disclose the additional stock compensation expense you recorded in June and

September as a result of your reassessment of the fair value of your option grants.

Executive Officers and Directors, page 160

7. For the background disclosure of Dr. Magovcevic-Liebisch, please indicate the principal

business of Ipsen. Refer to Regulation S-K Item 401(e)(1).

Role of the Board in Risk Oversight, page 165

8. Please clarify what risks you are referring to where you indicate the "four risks more fully

discussed in the section entitled 'Business.'

Principal Stockholders, page 187

9. Please revise footnote 5 to your table to identify the natural persons who are the beneficial

owners of the shares held by Hatteras Venture Partners VI, LP.

General

10. Please supplementally provide us with copies of all written communications, as defined in

Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf,

present to potential investors in reliance on Section 5(d) of the Securities Act, whether or

not they retain copies of the communications.

Ivana Magovevi-Liebisch, PhD, JD

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You may contact Al Pavot at 202-551-3738 or Sasha Parikh at 202-551-3627

if you have

questions regarding comments on the financial statements and related matters.

Please contact

Tyler Howes at 202-551-3370 or Tim Buchmiller at 202-551-3635 with any other

questions.

Sincerely,

Division of

Corporation Finance

Office of Life

Sciences

cc: Kingsley L. Taft, Esq.