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

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**FORM 8-A**

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**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES  
PURSUANT TO SECTION 12(b) OR (g) OF  
THE SECURITIES EXCHANGE ACT OF 1934**

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**Vigil Neuroscience, Inc.**  
(Exact name of registrant as specified in its charter)

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

**85-1880494**  
(I.R.S. Employer Identification No.)

**1 Broadway, 7th Floor, Suite 07-300**  
**Cambridge, Massachusetts**  
(Address of principal executive offices)

**02142**  
(Zip Code)

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

**Title of each class  
to be so registered**  
**Common Stock, par value \$0.0001 per share**

**Name of each exchange on which  
each class is to be registered**  
**The Nasdaq Stock Market LLC**

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A.(c) or (e), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A.(d) or (e), check the following box.

If this form relates to the registration of a class of securities concurrently with a Regulation A offering, check the following box.

**Securities Act registration statement file or Regulation A offering statement number to which this form relates (if applicable):**  
**333-261230**

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

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## INFORMATION REQUIRED IN REGISTRATION STATEMENT

### **Item 1. Description of Registrant's Securities to be Registered.**

For a description of Vigil Neuroscience, Inc.'s (the "Registrant") common stock, par value \$0.0001 per share (the "Common Stock"), to be registered hereunder, reference is made to the information set forth under the heading "Description of Capital Stock" in the Registrant's prospectus that constitutes a part of the Registrant's Registration Statement on Form S-1, as amended (File No. 333-261230) (the "Registration Statement"), filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), which information is hereby incorporated by reference. The description of the Common Stock included in any form of prospectus subsequently filed by the Registrant with the Commission pursuant to Rule 424(b) under the Securities Act shall be deemed to be incorporated by reference herein.

### **Item 2. Exhibits.**

In accordance with the "Instructions as to Exhibits" with respect to Form 8-A, no exhibits are required to be filed as part of this registration statement because no other securities of the Registrant are registered on The Nasdaq Stock Market LLC and the securities registered hereby are not being registered pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended.

**SIGNATURE**

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

VIGIL NEUROSCIENCE, INC.

Date: January 4, 2022

By: /s/ Ivana Magovčević-Liebisch  
Ivana Magovčević-Liebisch  
President and Chief Executive Officer