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

SCHEDULE 13D

Under the Securities Exchange Act of 1934
(Amendment No.)*

VIGIL NEUROSCIENCE, INC.
(Name of Issuer)

Common Stock, \$0.0001 par value per share
(Title of Class of Securities)

92673K108
(CUSIP Number)

Atlas Venture
Attention: Ommer Chohan, Chief Financial Officer
400 Technology Square, 10th Floor
Cambridge, MA 02139 USA
(857) 201-2700
(Name, Address and Telephone Number of Person Authorized to
Receive Notices and Communications)

January 11, 2022
(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1	NAMES OF REPORTING PERSONS: ATLAS VENTURE FUND XII, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS): (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY:	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS): WC	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e): <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION: Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER: 0
	8	SHARED VOTING POWER: 4,808,896 ¹
	9	SOLE DISPOSITIVE POWER: 0
	10	SHARED DISPOSITIVE POWER: 4,808,896 ¹
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 4,808,896 ¹	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS): <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11): 17.0% ²	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS): PN	

1 As described in Item 5 below, Atlas Venture Fund XII, L.P., a Delaware limited partnership (“Atlas XII”), Atlas Venture Associates XII, L.P., a Delaware limited partnership (“AVA XII LP”) and Atlas Venture Associates XII, LLC, a Delaware limited liability company (“AVA XII LLC” and together with Atlas XII and AVA XII LP, the “Fund XII Reporting Persons”) beneficially own 4,808,896 shares of the Issuer’s Common Stock. All of these shares are directly held by Atlas XII. AVA XII LP is the general partner of Atlas XII and AVA XII LLC is the general partner of AVA XII LP. Each of AVA XII LP and AVA XII LLC has voting and dispositive power over the shares held by Atlas XII. As such, each of the Fund XII Reporting Persons share voting and dispositive power with respect to the shares held by Atlas XII.

2 This percentage is calculated based upon 28,263,963 outstanding shares of Common Stock of the Issuer, as reported in the Issuer’s prospectus filed pursuant to Rule 424(b)(4), filed with the Securities and Exchange Commission on January 10, 2022.

1	NAMES OF REPORTING PERSONS: ATLAS VENTURE ASSOCIATES XII, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS): (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY:	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS): AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e): <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION: Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER: 0
	8	SHARED VOTING POWER: 4,808,896 ¹
	9	SOLE DISPOSITIVE POWER: 0
	10	SHARED DISPOSITIVE POWER: 4,808,896 ¹
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 4,808,896 ¹	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS): <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11): 17.0% ²	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS): PN	

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1	NAMES OF REPORTING PERSONS: ATLAS VENTURE ASSOCIATES XII, LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS): (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY:	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS): AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e): <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION: Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER: 0
	8	SHARED VOTING POWER: 4,808,896 ¹
	9	SOLE DISPOSITIVE POWER: 0
	10	SHARED DISPOSITIVE POWER: 4,808,896 ¹
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 4,808,896 ¹	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS): <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11): 17.0% ²	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS): OO	

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1	NAMES OF REPORTING PERSONS: ATLAS VENTURE OPPORTUNITY FUND I, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS): (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY:	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS): WC	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e): <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION: Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER: 0
	8	SHARED VOTING POWER: 1,027,978 ¹
	9	SOLE DISPOSITIVE POWER: 0
	10	SHARED DISPOSITIVE POWER: 1,027,978 ¹
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 1,027,978 ¹	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS): <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11): 3.6% ²	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS): PN	

1 As described in Item 5 below, Atlas Venture Opportunity Fund I, L.P., a Delaware limited partnership (“AVOF”), Atlas Venture Associates Opportunity I, L.P., a Delaware limited partnership (“AVAO LP”) and Atlas Venture Associates Opportunity I, LLC, a Delaware limited liability company (“AVAO LLC” and together with AVOF and AVAO LP, the “Opportunity Fund Reporting Persons”) beneficially own 1,027,978 shares of the Issuer’s Common Stock. All of these shares are held by AVOF. AVAO LP is the general partner of AVOF and AVAO LLC is the general partner of AVAO LP Each of AVAO LP and AVAO LLC has voting and dispositive power over the shares held by AVOF. As such, each of the Opportunity Fund Reporting Persons share voting and dispositive power with respect to the shares held by AVOF.

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1	NAMES OF REPORTING PERSONS: ATLAS VENTURE ASSOCIATES OPPORTUNITY I, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS): (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY:	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS): AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e): <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION: Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER: 0
	8	SHARED VOTING POWER: 1,027,978 ¹
	9	SOLE DISPOSITIVE POWER: 0
	10	SHARED DISPOSITIVE POWER: 1,027,978 ¹
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 1,027,978 ¹	
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- 2 This percentage is calculated based upon 28,263,963 outstanding shares of Common Stock of the Issuer, as reported in the Issuer’s prospectus filed pursuant to Rule 424(b)(4), filed with the Securities and Exchange Commission on January 10, 2022.

1	NAMES OF REPORTING PERSONS: ATLAS VENTURE ASSOCIATES OPPORTUNITY I, LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS): (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY:	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS): AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e): <input type="checkbox"/>	
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NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER: 0
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12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS): <input type="checkbox"/>	
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2 This percentage is calculated based upon 28,263,963 outstanding shares of Common Stock of the Issuer, as reported in the Issuer’s prospectus filed pursuant to Rule 424(b)(4), filed with the Securities and Exchange Commission on January 10, 2022.

INTRODUCTION

The following constitutes the Schedule 13D filed by the undersigned (the "Schedule 13D"). This Schedule 13D is being filed by Atlas Venture Fund XII, L.P., Atlas Venture Associates XII, L.P., Atlas Venture Associates XII, LLC, Atlas Venture Opportunity Fund I, L.P., Atlas Venture Associates Opportunity I, L.P. and Atlas Venture Associates Opportunity I, LLC, as described in Item 3 below.

ITEM 1. SECURITY AND ISSUER

The class of equity securities to which this Schedule 13D relates is common stock, par value \$0.0001 per share (the "Common Stock") of Vigil Neuroscience, Inc., a Delaware corporation (the "Issuer" or "Vigil"). The principal executive offices of the Issuer are located at 1 Broadway, 7th Floor, Suite 07-300, Cambridge, MA 02142.

ITEM 2. IDENTITY AND BACKGROUND

- (a) This Schedule 13D is filed by (i) Atlas Venture Fund XII, L.P., a Delaware limited partnership ("Atlas XII"), (ii) Atlas Venture Associates XII, L.P., a Delaware limited partnership ("AVA XII LP"), (iii) Atlas Venture Associates XII, LLC, a Delaware limited liability company ("AVA XII LLC" and together with Atlas XII and AVA XII LP, the "Fund XII Reporting Persons"), (iv) Atlas Venture Opportunity Fund I, L.P., a Delaware limited partnership ("AVOF"), (v) Atlas Venture Associates Opportunity I, L.P., a Delaware limited partnership ("AVAO LP") and (vi) Atlas Venture Associates Opportunity I, LLC, a Delaware limited liability company ("AVAO LLC" and together with AVOF and AVAO LP, the "Opportunity Fund Reporting Persons" and together with the Fund XII Reporting Persons, the "Reporting Persons").
- (b) The address of the principal place of business of each of the Reporting Persons is c/o 300 Technology Square, 8th Floor, Cambridge, Massachusetts 02139.
- (c) The principal business of each of the Reporting Persons is the venture capital investment business.
- (d) During the last five years, none of the Reporting Persons has been convicted in any criminal proceeding (excluding traffic violations or similar misdemeanors).
- (e) During the last five years, none of the Reporting Persons has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
- (f) Each of Atlas XII, AVA XII LP, AVOF and AVAO LP is a Delaware limited partnership. Each of AVA XII LLC and AVAO LLC is a Delaware limited liability company.

ITEM 3. SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION

As of the date hereof, the Reporting Persons may be deemed to beneficially own an aggregate of 5,836,874 shares of Common Stock, consisting of (i) 4,808,896 shares of Common Stock held by Atlas XII, of which 4,273,896 shares were held prior to the Issuer's initial public offering (the "Offering") and 535,000 that were purchased in the Offering and (ii) 1,027,978 shares of Common Stock held by AVOF, which shares were held prior to the Offering. The Offering closed on January 11, 2022. The 535,000 shares of Common Stock acquired by Atlas XII in the Offering were purchased for an aggregate purchase price of \$7.5 million.

The funds used by Atlas XII to acquire the securities described above were obtained from its general and limited partners.

ITEM 4. PURPOSE OF TRANSACTION

The Reporting Persons acquired the Common Stock for investment purposes. Except as set forth herein and except that the Reporting Persons or any of their affiliates may, from time to time or at any time, subject to market conditions and other factors, purchase additional Common Stock in the open market, in privately negotiated transactions or otherwise, or sell at any time all or a portion of the Common Stock now owned or hereafter acquired by them to one or more purchasers, as of the date of this Schedule 13D, none of the Reporting Persons has any present plans which relate to or would result in:

- (a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;
- (b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Issuer;
- (f) Any other material change in the Issuer's business or corporate structure including but not limited to, if the Issuer is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by section 13 of the Investment Company Act of 1940;
- (g) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- (i) A class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or
- (j) Any action similar to any of those enumerated above.

Bruce Booth, a member of Atlas XII and AVOF, has served on the board of directors of the Issuer since June 2020. As a director of the Issuer, Mr. Booth may have influence over the corporate activities of the Issuer, including activities which may relate to the transactions described in clauses (a) through (j) of this Item 4.

ITEM 5. INTEREST IN SECURITIES OF THE ISSUER

(a)(b) As of the date hereof, Atlas XII is the record owner of 4,808,896 shares of Common Stock. AVA XII LP is the general partner of Atlas XII and AVA XII LLC is the general partner of AVA XII LP. Each of Atlas XII, AVA XII LP and AVA XII LLC has shared voting and dispositive power over the shares held by Atlas XII. As such, each of Atlas XII, AVA XII LP and AVA XII LLC may be deemed to beneficially own the shares held by Atlas XII.

As of the date hereof, AVOF is the record owner of 1,027,978 shares of Common Stock. AVAO LP is the general partner of AVOF and AVAO LLC is the general partner of AVAO LP. Each of AVOF, AVAO LP and AVAO LLC has shared voting and dispositive power over the shares held by AVOF. As such, each of AVOF, AVAO LP and AVAO LLC may be deemed to beneficially own the shares held by AVOF.

Each of the Fund XII Reporting Persons and Opportunity Fund Reporting Persons may be deemed to beneficially own 17.0% and 3.6%, respectively, of the Issuer's outstanding Common Stock, which percentages are calculated based upon 28,263,963 outstanding shares of Common Stock of the Issuer, as reported in the Issuer's prospectus supplement filed pursuant to Rule 424(b)(4), filed with the Securities and Exchange Commission on January 10, 2022.

Collectively, the Reporting Persons beneficially own an aggregate of 5,836,874 shares of Common Stock, which represents 20.7% of the Issuer's outstanding Common Stock. The Fund XII Reporting Persons and the Opportunity Fund Reporting Persons are under common control and as a result, the Reporting Persons may be deemed to be members of a group. However, the Reporting Persons disclaim such group membership, and this Schedule 13D shall not be deemed an admission that the Reporting Persons are members of a group for purposes of Section 13 or for any other purposes.

- (c) Except as described herein, none of the Reporting Persons have purchased or sold any shares of Common Stock during the past 60 days.
- (d) No other person is known by the Reporting Persons to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the shares of Common Stock beneficially owned by the Reporting Persons.
- (e) Not applicable.

ITEM 6. CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO SECURITIES OF THE ISSUER**Investors' Rights Agreement**

Atlas XII, AVOF and certain other stockholders of the Issuer entered into an Amended and Restated Investors' Rights Agreement dated August 13, 2021 (the "Investors' Rights Agreement"), with the Issuer. Under the Investors' Rights Agreement, holders of registrable securities are entitled to rights with respect to the registration of these securities under the Securities Act of 1933, as amended (the "Securities Act"). The Investors' Rights Agreement includes demand rights, short-form registration rights and piggyback registration rights.

Demand Registration Rights

The holders of registrable securities are entitled to demand registration rights. Beginning six months after the completion of the Offering, the Issuer will be required, upon the written request of a majority of holders of the registrable securities then outstanding that would result in an aggregate offering price of at least \$10 million, to file a registration statement on Form S-1 with respect to at least 40% of the registrable securities then outstanding and to use commercially reasonable efforts to effect the registration of all or a portion of these shares for public resale.

Short Form Registration Rights

The holders of registrable securities are also entitled to short form registration rights. Pursuant to the Investors' Rights Agreement, if the Issuer is eligible to file a registration statement on Form S-3, upon the written request of at least 20% in interest of these holders to sell registrable securities at an aggregate price of at least \$3 million, the Issuer will be required to use commercially reasonable efforts to effect a registration of such shares. The Issuer is required to effect only two registrations in any twelve month period pursuant to this provision of the Investors' Rights Agreement.

Piggyback Registration Rights

The holders of registrable securities are entitled to piggyback registration rights. If the Issuer registers any of its securities either for its own account or for the account of other security holders, the holders of these shares are entitled to include their shares in the registration. Subject to certain exceptions contained in the Investors' Rights Agreement, the Issuer and the underwriters may limit the number of shares included in an underwritten offering to the number of shares which the Issuer and the underwriters determine in their sole discretion will not jeopardize the success of the offering.

Indemnification

The Investors' Rights Agreement contains customary cross-indemnification provisions, under which the Issuer is obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Expiration of Registration Rights

The registration rights granted under the Investors' Rights Agreement will terminate on the fifth anniversary of the completion of the Offering.

Lock-up Agreements

In connection with the Offering, Atlas XII and AVOF entered into lock-up agreements (the "Lock-up Agreements") with Morgan Stanley & Co. LLC and Jefferies LLC, as representatives of the underwriters of the Issuer's initial public offering. Pursuant to the Lock-up Agreements, Atlas XII and AVOF agreed, subject to certain exceptions, not to, during the period of 180 days following the date of the prospectus for the Issuer's initial public offering, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of the Issuer's common stock beneficially owned by Atlas XII or AVOF, or any other securities so owned convertible into or exercisable or exchangeable for common stock of the Issuer or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Issuer's common stock, except with the prior consent of Morgan Stanley & Co. LLC and Jefferies LLC.

The foregoing descriptions of the Investors' Rights Agreement and Lock-up Agreements do not purport to be complete and are qualified in its entirety by reference to the Investors' Rights Agreement and form of Lock-up Agreement filed as exhibits to this Schedule 13D and incorporated herein by reference.

ITEM 7. MATERIAL TO BE FILED AS EXHIBITS

- A. Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, effective as of August 13, 2021 (incorporated by reference to Exhibit 4.2 to the Issuer's Registration Statement on Form S-1 (SEC File No. 333-261230), filed with the Securities and Exchange Commission on January 3, 2022).
 - B. Form of Lockup Agreement
 - C. Agreement regarding filing of joint Schedule 13D.
-

SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: January 21, 2022

ATLAS VENTURE FUND XII, L.P.

By: Atlas Venture Associates XII, L.P., its general partner
By: Atlas Venture Associates XII, LLC, its general partner

By: /s/ Ommer Chohan
Name: Ommer Chohan
Title: Chief Financial Officer

ATLAS VENTURE ASSOCIATES XII, L.P.

By: Atlas Venture Associates XII, LLC, its general partner

By: /s/ Ommer Chohan
Name: Ommer Chohan
Title: Chief Financial Officer

ATLAS VENTURE ASSOCIATES XII, LLC

By: /s/ Ommer Chohan
Name: Ommer Chohan
Title: Chief Financial Officer

ATLAS VENTURE OPPORTUNITY FUND I, L.P.

By: Atlas Venture Associates Opportunity I, L.P., its general partner
By: Atlas Venture Associates Opportunity I, LLC, its general partner

By: /s/ Ommer Chohan
Name: Ommer Chohan
Title: Chief Financial Officer

ATLAS VENTURE ASSOCIATES OPPORTUNITY I, L.P.

By: Atlas Venture Associates Opportunity I, LLC, its general partner

By: /s/ Ommer Chohan
Name: Ommer Chohan
Title: Chief Financial Officer

ATLAS VENTURE ASSOCIATES OPPORTUNITY I, LLC

By: /s/ Ommer Chohan
Name: Ommer Chohan
Title: Chief Financial Officer

LOCK-UP AGREEMENT

[•], 2021

Morgan Stanley & Co. LLC
Jefferies LLC
As Representatives of the several Underwriters

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, New York 10036

c/o Jefferies LLC
820 Madison Avenue
New York, New York 10022

Ladies and Gentlemen:

The undersigned understands that Morgan Stanley & Co. LLC and Jefferies LLC (the “**Representatives**”) propose to enter into an Underwriting Agreement (the “**Underwriting Agreement**”) with Vigil Neuroscience, Inc., a Delaware corporation (the “**Company**”), providing for the public offering (the “**Public Offering**”) by the several Underwriters, including the Representatives (the “**Underwriters**”), of shares (the “**Shares**”) of the common stock, par value \$0.0001 per share of the Company (the “**Common Stock**”).

To induce the Underwriters that may participate in the Public Offering to continue their efforts in connection with the Public Offering, the undersigned hereby agrees that, without the prior written consent of each of the Representatives on behalf of the Underwriters, it will not, and will not publicly disclose an intention to, during the period commencing on the date hereof and ending 180 days after the date of the final prospectus (the “**Restricted Period**”) relating to the Public Offering (the “**Prospectus**”), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock beneficially owned (as such term is used in Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), by the undersigned or any other securities so owned convertible into or exercisable or exchangeable for Common Stock or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise.

The foregoing sentence shall not apply to:

(a) transactions relating to shares of Common Stock or other securities acquired (i) from the Underwriters in the Public Offering [(other than any issuer-directed shares of Common Stock purchased in the Public Offering by an officer or director of the Company)] or (ii) in open market transactions after the completion of the Public Offering, *provided* that no filing under Section 16(a) of the Exchange Act, or any other public announcement, shall be required or shall be voluntarily made in connection with subsequent sales of Common Stock or other securities acquired in such open market transactions;

(b) transfers of shares of Common Stock or any security convertible into or exchangeable for Common Stock (i) as a bona fide gift or to a charitable organization or educational institution in a transfer not involving a disposition for value or (ii) if the undersigned is a corporation, partnership or other business entity, as part of a disposition, transfer or distribution without consideration to limited partners or stockholders of the undersigned;

(c) transfers or dispositions of Common Stock or any security convertible into Common Stock to any immediate family member of the undersigned or any trust for the direct or indirect benefit of the undersigned or an immediate family member of the undersigned, or if the undersigned is a trust, to a grantor, trustee or beneficiary of the trust (including such beneficiary's estate) of the undersigned, in each case set forth in this clause (c) in a transaction not involving a disposition for value;

(d) transfers or dispositions of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock (i) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the undersigned upon the death of the undersigned or (ii) by operation of law pursuant to orders of a court or regulatory agency, in connection with a negotiated divorce settlement or pursuant to a qualified domestic relations order;

(e) if the undersigned is an entity, transfers, dispositions or distributions of shares of Common Stock or any security convertible into Common Stock (i) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (within the meaning set forth in Rule 405 under the Securities Act of 1933, as amended, and including the subsidiaries of the undersigned) of the undersigned, (ii) to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the undersigned or affiliates of the undersigned (including, for the avoidance of doubt, where the undersigned is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership) or (iii) to its stockholders, limited partners, general partners, limited liability company members or other equityholders or to the estate of any such stockholders, limited partners, general partners, limited liability company members or equityholders;

(f) transfers or dispositions of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock to the Company (i) pursuant to any contractual arrangement in effect on the date of this agreement and described in the preliminary prospectus contained in the registration statement relating to the Public Offering at the time such registration statement became effective (the "Time of Sale Prospectus") as well as in the Prospectus that provides for the repurchase of the undersigned's Common Stock or other securities by the Company or (ii) in connection with the termination of the undersigned's employment with or service to the Company; provided that such transfers or dispositions are not required to be reported with the SEC on Form 4 in accordance with Section 16 under the Exchange Act and no other public announcement shall be voluntarily made during the Restricted Period in connection with any such transfers or dispositions (other than (1) Schedule 13 filings filed with the SEC, and (2) any Form 4 or Form 5 required to be filed under the Exchange Act if the undersigned is subject to Section 16 reporting with respect to the Company under the Exchange Act and indicating by footnote disclosure or otherwise the nature of the transfer or disposition);

(g) transfers or dispositions of Common Stock or other securities to the Company in connection with the conversion of any convertible security into, or the exercise of any option or warrant for, Common Stock (including by way of “net” or “cashless” exercise solely to cover withholding tax obligations in connection with such exercise and any transfer to the Company for the payment of taxes as a result of such exercise) in each case pursuant to any equity incentive plan of the Company described in the Time of Sale Prospectus and the Prospectus and to the extent permitted by the instruments representing such options outstanding as of the date of the Prospectus; provided that (i) any such Common Stock received by the undersigned shall be subject to the terms of this agreement and (ii) no filing under Section 16 of the Exchange Act, reporting a reduction in beneficial ownership of Common Stock, or other public announcement shall be required or shall be voluntarily made during the Restricted Period (other than a filing on a Form 4 that reports such disposition under the transaction code “F” and indicates by footnote disclosure or otherwise the nature of the transfer or disposition);

(h) (i) transfers of Common Stock (or any securities convertible into or exercisable or exchangeable for Common Stock) pursuant to a bona fide third-party tender offer for shares of the Company’s capital stock made to all holders of the Company’s securities, merger, consolidation or other similar transaction approved by the Company’s board of directors the result of which is that any person (as defined in Section 13(d)(3) of the Exchange Act), or group of persons, other than the Company, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of more than 50% of the total voting power of the voting stock of the Company and (ii) entry into any lock-up, voting or similar agreement pursuant to which the undersigned may agree to transfer, sell, tender or otherwise dispose of Common Stock or such other securities in connection with a transaction described in (i) above; provided that in the event that such change of control transaction is not completed, the Common Stock (or any security convertible into or exercisable or exchangeable for Common Stock) owned by the undersigned shall remain subject to the restrictions contained in this agreement;

(i) facilitating the establishment of a trading plan on behalf of a shareholder, officer or director of the Company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Common Stock, *provided* that (i) such plan does not provide for the transfer of Common Stock during the Restricted Period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the undersigned or the Company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of Common Stock may be made under such plan during the Restricted Period;

provided that in the case of any transfer or distribution pursuant to clause (b), (c), (d) and (e), (i) each transferee, donee or distributee shall sign and deliver a lock-up agreement substantially in the form of this agreement and (ii) no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of Common Stock, or any other public announcement, shall be required or shall be voluntarily made during the Restricted Period (other than, in the case of a transfer or other disposition pursuant to clause (d) above, any Form 4 or Form 5 required to be filed under the Exchange Act if the undersigned is subject to Section 16 reporting with respect to the Company under the Exchange Act, and any such filing will indicate by footnote disclosure or otherwise the nature of the transfer or disposition).

For purposes of this agreement, “immediate family member” shall mean any relationship by blood, marriage, domestic partnership or adoption, not more remote than first cousin.

In addition, the undersigned agrees that, without the prior written consent of the Representatives on behalf of the Underwriters, it will not, during the Restricted Period, make any demand for or exercise any right with respect to, the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company’s transfer agent and registrar against the transfer of the undersigned’s shares of Common Stock except in compliance with the foregoing restrictions.

In the event that (i) the Representatives release, in full or in part, any (x) director of the Company, (y) executive officer of the Company or (z) stockholder holding five percent (5%) or more of the outstanding shares of Common Stock of the Company (each such director, executive officer or stockholder, a “**Triggering Shareholder**”) from the restrictions of any lock-up agreement similar to this agreement between such Triggering Shareholder and the Representatives in connection with the Public Offering and (ii) such release or series of releases granted to any Triggering Shareholder cumulatively relates to Common Stock or other securities of the Company in an amount or amounts having a fair market value of more than \$2,500,000 in the aggregate ((i) and (ii) together, a “**Triggering Release**”), then the undersigned shall be automatically released from the terms of this letter to the same extent, with respect to the same percentage of Company securities of the undersigned as the percentage of Company securities being released in the Triggering Release represent with respect to the Company securities held by the Triggering Shareholder (calculated as a percentage of the total outstanding shares of Common Stock held by the Triggering Shareholder) at the time of the request of the Triggering Release. In the event of a Triggering Release, the Company shall use commercially reasonable efforts to notify the undersigned of the occurrence of each such Triggering Release within three business days thereof, provided that the failure to provide such notice shall not give rise to any claim or liability against the Representatives or the Underwriters. Notwithstanding the foregoing, (1) the provisions of this paragraph will not apply if the release or waiver is effected (A) solely to permit a transfer not involving a disposition for value and if the transferee agrees in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of transfer or (B) in the case of a natural person, due to circumstances of a bona fide emergency or hardship, as determined by the Representatives in their sole judgment, and (2) if the release or waiver is in connection with any secondary underwritten public offering of Shares (including a secondary underwritten public offering with a primary component) (an “**Underwritten Sale**”), then such waiver or release shall only apply with respect to, and to the extent of, the undersigned’s participation in such Underwritten Sale, *provided* that, if the undersigned has a contractual right to “piggyback” on a registration statement filed by the Company for the offer and sale of Common Stock in an Underwritten Sale, the undersigned is offered the opportunity to participate in the secondary component of any such Underwritten Sale pursuant to such contractual rights.

The undersigned understands that the Company and the Underwriters are relying upon this agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors and assigns.

The undersigned acknowledges and agrees that the Underwriters have not provided any recommendation or investment advice nor have the Underwriters solicited any action from the undersigned with respect to the Public Offering and the undersigned has consulted their own legal, accounting, financial, regulatory and tax advisors to the extent deemed appropriate. The undersigned further acknowledges and agrees that, although the Underwriters may provide certain Regulation Best Interest and Form CRS disclosures or other related documentation to you in connection with the Public Offering, the Underwriters are not making a recommendation to you to participate in the Public Offering or sell any Shares at the price determined in the Public Offering, and nothing set forth in such disclosures or documentation is intended to suggest that any Underwriter is making such a recommendation.

The undersigned hereby consents to receipt of this agreement in electronic form and understand and agree that this letter agreement may be signed electronically. If any signature is delivered by facsimile transmission, electronic mail, or otherwise by electronic transmission evidencing an intent to sign this agreement (including any electronic signature complying with the U.S. federal E-SIGN Act of 2000, e.g., www.docusign.com), such facsimile transmission, electronic mail or other electronic transmission shall create a valid and binding obligation of the undersigned with the same force and effect as if such signature were an original. Execution and delivery of this agreement by facsimile transmission, electronic mail or other electronic transmission is legal, valid and binding for all purposes.

The undersigned further acknowledges and agrees that none of the Underwriters has made any recommendation or provided any investment or other advice to the undersigned with respect to this Lock-Up Agreement or the subject matter hereof, and the undersigned has consulted its own legal, accounting, financial, regulatory, tax and other advisors with respect to this Lock-Up Agreement and the subject matter hereof to the extent the undersigned has deemed appropriate.

The undersigned acknowledges and agrees that the foregoing precludes the undersigned from engaging in any hedging or other transaction designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition of any shares of Common Stock, or any securities convertible into or exercisable or exchangeable for Common Stock, even if any such sale or disposition transaction or transactions would be made or executed by or on behalf of someone other than the undersigned.

Whether or not the Public Offering actually occurs depends on a number of factors, including market conditions. Any Public Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation between the Company and the Underwriters.

Notwithstanding anything to the contrary contained herein, this agreement shall immediately terminate and the undersigned shall be released from all obligations under this agreement if (i) the Company notifies the Representatives, on the one hand, or the Representatives notify the Company, on the other hand, in writing, prior to the execution of the Underwriting Agreement, that it has determined not to proceed with the Public Offering, (ii) the Company files an application with the Securities and Exchange Commission to withdraw the registration statement related to the Public Offering, (iii) the Underwriting Agreement is executed but is then terminated (other than the provisions thereof which survive termination) prior to payment for and delivery of the Shares to be sold thereunder, or (iv) March 15, 2022, in the event the Underwriting Agreement has not been executed by such date.

This agreement and any claim, controversy or dispute arising under or related to this agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to the conflict of laws principles thereof.

Very truly yours,

(Name)

(Address)

[Signature Page to Lock-up Agreement]

FORM OF PRESS RELEASE

Vigil Neuroscience, Inc.
[Date]

Vigil Neuroscience, Inc. (the “**Company**”) announced today that Morgan Stanley & Co. LLC and Jefferies LLC as Representatives of the several underwriters of the Company’s recent public sale of [•] shares of its common stock is [waiving][releasing] a lock-up restriction with respect to [•] shares of the Company’s common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver][release] will take effect on [•], 2021, and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.

EXHIBIT C**JOINT FILING AGREEMENT**

Pursuant to Rule 13d-1(k)(1) promulgated pursuant to the Securities Exchange Act of 1934, as amended, the undersigned agree that the attached Schedule 13D is being filed on behalf of each of the undersigned.

Dated: January 21, 2022

ATLAS VENTURE FUND XII, L.P.

By: Atlas Venture Associates XII, L.P., its general partner

By: Atlas Venture Associates XII, LLC, its general partner

By: /s/ Ommer Chohan

Name: Ommer Chohan

Title: Chief Financial Officer

ATLAS VENTURE ASSOCIATES XII, L.P.

By: Atlas Venture Associates XII, LLC, its general partner

By: /s/ Ommer Chohan

Name: Ommer Chohan

Title: Chief Financial Officer

ATLAS VENTURE ASSOCIATES XII, LLC

By: /s/ Ommer Chohan

Name: Ommer Chohan

Title: Chief Financial Officer

ATLAS VENTURE OPPORTUNITY FUND I, L.P.

By: Atlas Venture Associates Opportunity I, L.P., its general partner

By: Atlas Venture Associates Opportunity I, LLC, its general partner

By: /s/ Ommer Chohan

Name: Ommer Chohan

Title: Chief Financial Officer

ATLAS VENTURE ASSOCIATES OPPORTUNITY I, L.P.

By: Atlas Venture Associates Opportunity I, LLC, its general partner

By: /s/ Ommer Chohan

Name: Ommer Chohan

Title: Chief Financial Officer

ATLAS VENTURE ASSOCIATES OPPORTUNITY I, LLC

By: /s/ Ommer Chohan

Name: Ommer Chohan

Title: Chief Financial Officer