

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

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): August 12, 2022

VIGIL NEUROSCIENCE, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-41200
(Commission
File Number)

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

Vigil Neuroscience, Inc.
1 Broadway, 7th Floor, Suite 07-300
Cambridge, Massachusetts , 02142
(Address of principal executive offices, including zip code)

(857) 254-4445
(Registrant's telephone number, including area code)

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Title of each class	Trade Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	VIGL	The Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 1.01 Entry into a Material Definitive Agreement.

Securities Purchase Agreement

On August 12, 2022, Vigil Neuroscience, Inc. (the “Company”) and certain accredited investors (each an “Investor” and collectively, the “Investors”) entered into a securities purchase agreement (the “Securities Purchase Agreement”) pursuant to which the Company agreed to sell and issue to the Investors in a private placement (the “Private Placement”) (i) an aggregate of 7,293,084 shares (the “Shares”) of the Company’s common stock, par value \$0.0001 per share (the “Common Stock”), at a purchase price of \$7.30 per share, and (ii) in lieu of shares of Common Stock, 2,980,889 pre-funded warrants (the “Pre-Funded Warrants”) to purchase Common Stock (the “Warrant Shares” and together with the Shares and the Pre-Funded Warrants, the “Securities”), at a purchase price of \$7.2999 per Pre-Funded Warrant. The Pre-Funded Warrants will have an exercise price of \$0.0001 per share of Common Stock, be immediately exercisable and remain exercisable until exercised in full.

The Private Placement is anticipated to close on August 16, 2022, subject to customary closing conditions. The Company anticipates receiving gross proceeds from the Private Placement of approximately \$75.0 million, before deducting fees to the placement agent and other offering expenses payable by the Company. The Company expects to use the proceeds from the Private Placement to fund the clinical development of its TREM2 agonist antibody and small molecule programs as well as working capital and other general corporate purposes. The proceeds from the Private Placement, combined with the current cash and cash equivalents, is expected to fund its operational plans into the first quarter of 2025.

The foregoing description of the Securities Purchase Agreement and the Pre-Funded Warrants does not purport to be complete and is qualified in its entirety by reference to the complete text of the Securities Purchase Agreement and the form of the Pre-Funded Warrant, which are attached hereto as Exhibits 10.1 and 4.1, respectively, to this Current Report on Form 8-K and are hereby incorporated by reference into this Item 1.01.

Registration Rights

In connection with the Private Placement, the Company and the Investors entered into a Registration Rights Agreement dated August 12, 2022 (the “Registration Rights Agreement”), providing for the registration for resale of the Securities (including the shares of Common Stock underlying the Pre-Funded Warrants) that are not then registered on an effective registration statement, pursuant to a registration statement (the “Registration Statement”) to be filed with the Securities and Exchange Commission (the “SEC”) on or prior to October 11, 2022 (the “Filing Date”). The Company has agreed to use its best efforts to cause the Registration Statement to be declared effective as soon as possible, but in no event later than 100 days of the closing of the Private Placement (or 135 days in the event of a full review of the Registration Statement by the SEC) (the “Effectiveness Date”), and to keep the Registration Statement continuously effective for a period that extends from the first date on which the SEC issues an order of effectiveness in relation to the Registration Statement until such date that all registrable securities (as such term is defined in the Registration Rights Agreement) covered by the Registration Statement have been sold thereunder or pursuant to Rule 144 or may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the Company to be in compliance with the current public information requirement under Rule 144.

In the event (i) the Registration Statement is not filed on or prior to the Filing Date, or (ii) the Company fails to file with the SEC a request for acceleration of a registration statement in accordance with Rule 461 promulgated under the Act within five trading days of the date that the Company is notified by the SEC that the Registration Statement will not be “reviewed” or will not be subject to further review, within five trading days of such notification, or (iii) prior to the effective date of the Registration Statement, the Company fails to file any required pre-effective amendment and otherwise respond in writing to comments made by the SEC in respect of such Registration Statement within fifteen trading days after the receipt of comments by or notice from the SEC that such amendment is required in order for such Registration Statement to be declared effective, or (iv) the Registration Statement is not declared effective by the Effectiveness Date for a reason reasonably attributed to the action or inaction of the Company, or (v) after the effective date of the Registration Statement, it ceases for any reason to remain continuously effective as to the Securities, or the holders are otherwise not permitted to utilize the prospectus therein

to resell the Securities, for more than 15 consecutive calendar days or more than an aggregate of twenty calendar days during any 12-month period, then, until the applicable event is cured, the Company shall pay to each holder an amount in cash, as partial liquidated damages and not as penalty, equal to the product of 1.0% multiplied by the aggregate subscription amount paid by such holder pursuant to the Securities Purchase Agreement, subject to certain caps set forth in the Registration Rights Agreement.

The Company has granted the Investors customary indemnification rights in connection with the Registration Statement. The Investors have also granted the Company customary indemnification rights in connection with the Registration Statement.

The foregoing description of the Registration Rights Agreement does not purport to be complete and is qualified in its entirety by reference to the Registration Rights Agreement, a copy of which is filed as Exhibit 10.2 hereto and incorporated by reference into this Item 1.01.

Item 3.02 Unregistered Shares of Equity Securities.

The information contained above in Item 1.01 relating to the Private Placement is hereby incorporated by reference into this Item 3.02. Based in part upon the representations of the Investors in the Securities Purchase Agreement, the offering and sale of the securities was made in reliance on the exemption afforded by Regulation D under the Securities Act of 1933, as amended (the "Securities Act"), and corresponding provisions of state securities or "blue sky" laws. The Securities (including the shares of Common Stock underlying the Pre-Funded Warrants) have not been registered under the Securities Act or any state securities laws and may not be offered or sold in the United States absent registration with the SEC or an applicable exemption from the registration requirements. The sale of the Securities did not involve a public offering and was made without general solicitation or general advertising. The Investors represented that they are accredited investors, as such term is defined in Rule 501(a) of Regulation D under the Securities Act, and that they are acquiring the securities for investment purposes only and not with a view to any resale, distribution or other disposition of the securities in violation of the U.S. federal securities laws.

Neither this Current Report on Form 8-K nor any exhibit attached hereto is an offer to sell or the solicitation of an offer to buy shares of Common Stock or other securities of the Company.

Item 8.01 Other Events.

On August 12, 2022, the Company issued a press release announcing the Private Placement. The press release is attached as Exhibit 99.2 to this Current Report on Form 8-K and incorporated into this Item 8.01 by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
4.1	Form of Pre-Funded Warrant
10.1*	Securities Purchase Agreement, dated August 12, 2022, by and among Vigil Neuroscience, Inc. and the persons party thereto
10.2*	Registration Rights Agreement, dated August 12, 2022, by and among Vigil Neuroscience, Inc. and the persons party thereto
99.1	Press Release, dated August 12, 2022
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Vigil Neuroscience, Inc.

Date: August 12, 2022

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

THE SECURITIES AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR IN ANY OTHER JURISDICTION. THE SECURITIES AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES REPRESENTED HEREBY MAY NOT BE OFFERED, SOLD OR TRANSFERRED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER APPLICABLE SECURITIES LAWS UNLESS OFFERED, SOLD OR TRANSFERRED PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THOSE LAWS, INCLUDING RULE 144 UNDER THE SECURITIES ACT. NOTWITHSTANDING THE FOREGOING, THE SECURITIES AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY THE SECURITIES; PROVIDED THAT IN CONNECTION WITH ANY FORECLOSURE OR TRANSFER OF THE SECURITIES, THE TRANSFEROR SHALL COMPLY WITH THE PROVISIONS HEREIN, IN THE SECURITIES PURCHASE AGREEMENT, AND UPON FORECLOSURE OR TRANSFER OF THE SECURITIES, SUCH FORECLOSING PERSON OR TRANSFEREE SHALL COMPLY WITH ALL PROVISIONS CONTAINED HEREIN, IN THE SECURITIES PURCHASE AGREEMENT.

VIGIL NEUROSCIENCE, INC.

[FORM OF] PRE-FUNDED WARRANT TO PURCHASE COMMON STOCK

Warrant No. [•]

Number of Shares: [•]
(subject to adjustment)

Original Issue Date: August 12, 2022

Vigil Neuroscience, Inc., a Delaware corporation (the “Company”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [•] or its permitted assigns (the “Holder”), is entitled, subject to the terms set forth below, to purchase from the Company up to a total of [•] shares of common stock, \$0.0001 par value per share (the “Common Stock”), of the Company (each such share, a “Warrant Share” and all such shares, the “Warrant Shares”) at an exercise price per share equal to \$0.0001 per share (as adjusted from time to time as provided in Section 9 herein, the “Exercise Price”), upon surrender of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the “Warrant”) at any time and from time to time on or after the date hereof (the “Original Issue Date”), and subject to the following terms and conditions:

1. Definitions. For purposes of this Warrant, the following terms shall have the following meanings:

(a) “Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

(b) “Attribution Parties” means, collectively, the following Persons and entities: (i) any direct or indirect Affiliates of the Holder, (ii) any Person acting or who reasonably could be deemed to be acting as a Group together with the Holder or any of the foregoing and (iii) any other Persons whose beneficial ownership of the Company’s Common Stock reasonably could be aggregated with the Holder’s and the other Attribution Parties for purposes of Section 13(d) or Section 16 of the Exchange Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Maximum Percentage.

(c) “Closing Sale Price” means, for any security as of any date, the last trade price for such security on the Principal Trading Market for such security, as reported by Bloomberg Financial Markets, or, if such Principal Trading Market begins to operate on an extended hours basis and does not designate the last trade price, then the last trade price of such security prior to 4:00 P.M., New York City time, as reported by Bloomberg Financial Markets, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg Financial Markets, or, if no last trade price is reported for such security by Bloomberg Financial Markets, the average of the bid and ask prices, of any market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly OTC Markets Inc.) as of 4:00 P.M., New York City time on such date. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then the Board of Directors of the Company shall use its good faith judgment to determine the fair market value. The determination of the Board of Directors of the Company shall be binding upon all parties absent demonstrable error. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

(d) “Exchange Act” means the Securities Exchange Act of 1934, as amended.

(e) “Person” means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

(f) “Principal Trading Market” means the national securities exchange or other trading market on which the Common Stock is primarily listed on and quoted for trading, which, as of the Original Issue Date shall be the Nasdaq Global Select Market.

(g) “SEC” means the United States Securities and Exchange Commission.

(h) “Securities Act” means the Securities Act of 1933, as amended.

(i) “Securities Purchase Agreement” means that certain Securities Purchase Agreement dated as of August 12, 2022.

(j) “Standard Settlement Period” means the standard settlement period, expressed in a number of Trading Days, for the Company’s primary trading market or quotation system with respect to the Common Stock that is in effect on the date of delivery of an applicable Exercise Notice, which as of the Original Issue Date was “T+2”.

(k) “Trading Day” means a day on which the Common Stock is traded on Principal Trading Market.

(l) “Transfer Agent” or “Warrant Agent” means Computershare Trust Company, N.A., the Company’s transfer agent and registrar for the Common Stock, and any successor appointed in such capacity, or if none, the Company.

2. Issuance of Securities; Registration of Warrants. The Warrant, as initially issued by the Company, is offered and sold pursuant to the Securities Purchase Agreement. Accordingly, the Warrant and the Warrant Shares are “restricted securities” under Rule 144 promulgated under the Securities Act. The Company shall register ownership of this Warrant, upon records to be maintained by the Company for that purpose (the “Warrant Register”), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner and holder hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

3. Registration of Transfers. Subject to compliance with all applicable securities laws, the Company shall, or will cause the Warrant Agent to, register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, together with a written assignment of this Warrant substantially in the form attached hereto as Schedule 2 duly executed by the Holder, and payment for all applicable transfer taxes accompanied by reasonable evidence of authority of the party making such request that may be required by the Warrant Agent including, but not limited to, the signature guarantee of a guarantor institution which is a participant in a signature

guarantee program approved by the Securities Transfer Association. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a "New Warrant") evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant. The Company shall, or will cause the Warrant Agent to, prepare, issue and deliver at the Company's own expense any New Warrant under this Section 3. Until due presentment for registration of transfer, the Company may deem and treat the registered Holder of this Warrant as the absolute owner and holder for all purposes, absent actual notice to the contrary.

4. Exercise of Warrants.

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by this Warrant at any time and from time to time on or after the Original Issue Date.

(b) The Holder may exercise this Warrant by delivering to the Company (i) an exercise notice, in the form attached as Schedule 1 hereto (the "Exercise Notice"), completed and duly signed, and (ii) payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a "cashless exercise" if so indicated in the Exercise Notice pursuant to Section 10 below), and the date on which the last of such items is delivered to the Company (as determined in accordance with the notice provisions hereof) is an "Exercise Date." The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares, if any. The aggregate exercise price of this Warrant, except for the Exercise Price, was pre-funded to the Company on or before the Original Issue Date, and consequently no additional consideration (other than the Exercise Price) shall be required by to be paid by the Holder to effect any exercise of this Warrant. The Holder shall not be entitled to the return or refund of all, or any portion, of such pre-funded exercise price under any circumstance or for any reason whatsoever. The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.

5. Delivery of Warrant Shares.

(a) Upon exercise of this Warrant, the Company shall promptly (but in no event later than the number of Trading Days comprising the Standard Settlement Period): (1) credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with The Depository Trust Company ("DTC") through its Deposit/Withdrawal At Custodian system provided that the Transfer Agent is then a participant in the DTC Fast Automated Securities Transfer ("FAST") Program if either (A) there is an effective registration statement permitting the issuance of such Warrant Shares to or resale of such Warrant Shares by the Holder or (B) such Warrant Shares are eligible for resale by the Holder without volume or manner-of-sale limitations pursuant to Rule 144 promulgated under the Securities Act, or (2) otherwise issue such Warrant Shares in the name of the Holder or its designee in restricted book-entry form in the Company's share register. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. The Holder, or any natural person or legal entity (each, a "Person") permissibly so designated by the Holder to receive Warrant Shares, shall be deemed to have become the holder of record of such Warrant Shares as of the Exercise Date, irrespective of the date such Warrant Shares are credited to the Holder's or its designee's DTC account or the date of the book entry positions evidencing such Warrant Shares, as the case may be. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if issued in restricted book-entry form, will contain a customary legend to the effect that the Warrant Shares are not registered.

(b) If within the Standard Settlement Period after the Exercise Date, the Company fails to deliver to the Holder or its designee the required number of Warrant Shares in the manner required pursuant to Section 5(a) or fails to credit the Holder's or its designee's balance account with DTC for such number of Warrant Shares to which the Holder is

entitled (including as the result of an Authorized Share Failure, but other than a failure caused by incorrect or incomplete information provided by the Holder to the Company), and if after such number of Trading Days comprising the Standard Settlement Period and prior to the receipt of such Warrant Shares, the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall, within two (2) Trading Days after the Holder's request and in the Holder's sole and absolute discretion, either (1) pay in cash to the Holder an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased, at which point the Company's obligation to issue such Warrant Shares shall terminate or (2) promptly honor its obligation to deliver to the Holder or its designee such Warrant Shares or credit the Holder's or its designee's balance account with DTC for such Warrant Shares and pay cash to the Holder in an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In, less the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the Closing Sale Price of a share of Common Stock on the Exercise Date.

(c) To the extent permitted by law and subject to Section 5(b), the Company's obligations to issue and deliver Warrant Shares in accordance with and subject to the terms hereof (including the limitations set forth in Section 11 below) are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Subject to Section 5(b), nothing herein shall limit the Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

6. Charges, Taxes and Expenses. Issuance and delivery of shares of Common Stock upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense (excluding any applicable stamp duties) in respect of the issuance of such shares, all of which taxes and expenses shall be paid by the Company; provided, however, that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the registration of any Warrant Shares or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

7. Replacement of Warrant. In the event of any loss, theft or destruction of a Warrant for which the Company and the Warrant Agent shall have received from the registered holder an indemnification reasonably satisfactory to the Company and the Warrant Agent holding the Warrant Agent and Company harmless, the Warrant Agent shall issue a New Warrant in a form mutually agreed to by the Warrant Agent and the Company for those certificates alleged to have been lost, stolen or destroyed, absent notice to the Warrant Agent that such certificates have been acquired by a bona fide purchaser and, at the Company's or the Warrant Agent's request, reimbursement to the Company and the Warrant Agent of all reasonable expenses incidental thereto. The Warrant Agent may, at its option, issue replacement Warrants for mutilated certificates upon presentation thereof without such indemnity.

8. Reservation of Warrant Shares. The Company covenants that it will, at all times while this Warrant is outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other Purchase Rights (as defined below) of Persons other than the Holder (taking into account the adjustments and restrictions of Section 9). The failure of the Company to reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock a sufficient number of shares of Common Stock to enable it to issue Warrant Shares upon exercise of this Warrant as herein provided is referred to herein as an "Authorized Share Failure." The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and non-assessable. The Company will take all actions

as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed or of any contract to which the Company or any of its subsidiaries is bound. The Company further covenants that it will not, without the prior written consent of the Holder, increase the par value of the Common Stock at any time while this Warrant is outstanding. In furtherance of the Company's obligations set forth in this Section 8, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than one hundred and twenty (120) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its reasonable best efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the stockholders that they approve such proposal. Notwithstanding the foregoing, if any such time of an Authorized Share Failure, the Company is able to obtain the written consent of a majority of the shares of its issued and outstanding shares of Common Stock to approve the increase in the number of authorized shares of Common Stock, the Company may satisfy this obligation by obtaining such consent and submitting for filing with the SEC a definitive Information Statement on Schedule 14C, and such obligation shall be deemed satisfied on the 21st calendar day after such filing is accepted.

9. Certain Adjustments. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 9.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock issued and outstanding on the Original Issue Date and in accordance with the terms of such stock on the Original Issue Date or as amended, that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares of Common Stock, (iii) combines its outstanding shares of Common Stock into a smaller number of shares of Common Stock or (iv) issues by reclassification of shares of capital stock any additional shares of Common Stock of the Company, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, provided, however, that if such record date shall have been fixed and such dividend is not fully paid on the date fixed therefor, the Exercise Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Exercise Price shall be adjusted pursuant to this paragraph as of the time of actual payment of such dividends. Any adjustment pursuant to clause (ii) through (iv) of this paragraph shall become effective immediately after the effective date of such subdivision, combination or issuance.

(b) Pro Rata Distributions. If, on or after the Original Issue Date, the Company shall declare or make any dividend or other pro rata distribution of its assets (or rights to acquire its assets) (including, without limitation, by way of return of capital) to holders of shares of Common Stock (including, without limitation, any distribution of cash, stock or other securities, property, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction, but, for the avoidance of doubt, excluding any distribution of shares of Common Stock subject to Section 9(a), any distribution of Purchase Rights subject to Section 9(c) and any Fundamental Transaction (as defined below) subject to Section 9(d)) (a "Distribution") then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage (as defined below)) immediately before the date on which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, that to the extent that the Holder's right to participate in any such Distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Distribution to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times as (all or a portion) its

right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted (all or such portion of) such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

(c) Purchase Rights. If at any time on or after the Original Issue Date, the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property, in each case pro rata to the record holders of any class of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of Common Stock are to be determined for the grant, issuance or sale of such Purchase Rights (provided, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right to be held similarly in abeyance) to the same extent as if there had been no such limitation). As used in this Section 9(c), (i) "Options" means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities and (ii) "Convertible Securities" mean any capital stock, debt, securities or other contractual rights (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(d) Fundamental Transactions. If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the surviving entity or the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting power of the surviving entity immediately after such merger or consolidation, (ii) the Company effects any sale to another Person of all or substantially all of its assets in one or a series of related transactions, (iii) pursuant to any tender offer or exchange offer (whether by the Company or another Person), holders of capital stock who tender shares representing more than 50% of the voting power of the capital stock of the Company and the Company or such other Person, as applicable, accepts such tender for payment, (iv) the Company consummates a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than the 50% of the voting power of the capital stock of the Company (except for any such transaction in which the stockholders of the Company immediately prior to such transaction maintain, in substantially the same proportions, the voting power of such Person immediately after the transaction) or (v) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 9(a) above) (in any such case, a "Fundamental Transaction"), then following such Fundamental Transaction the Holder shall have the right to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the "Alternate Consideration"). If the Company undertakes a Fundamental Transaction and the Alternate Consideration is solely in the form of cash, then the Company shall provide for the simultaneous "cashless exercise" of this Warrant pursuant to Section 10 below. If the Company undertakes a Fundamental Transaction in which the Company is not the surviving entity and the Alternate Consideration includes securities of another Person, then the Company shall provide that, prior to or simultaneously with the consummation of such Fundamental Transaction, any successor to the Company, surviving entity or other Person (including any purchaser of assets of the Company) shall assume the obligation to deliver to the Holder such Alternate Consideration as the Holder is entitled to receive in accordance with the foregoing provisions, and to assume the other obligations under this Warrant.

(e) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section 9 (including any adjustment to the Exercise Price that would have been effected but for the final sentence in this paragraph (e)), the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment, the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment. Notwithstanding the foregoing, in no event may the Exercise Price be adjusted below the par value of the Common Stock then in effect.

(f) Calculations. All calculations under this Section 9 shall be made to the nearest one ten-hundredth of one cent or the nearest share, as applicable.

(g) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will, at the written request of the Holder, promptly compute such adjustment, in good faith, in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Company's transfer agent and the Warrant Agent, and will issue a New Warrant to the Holder reflecting such calculations.

(h) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other pro rata distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then the Company shall deliver to the Holder a notice of such transaction at least ten (10) days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. In addition, if while this Warrant is outstanding, the Company authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction contemplated by Section 9(d), other than a Fundamental Transaction under clause (iii) of Section 9(d), the Company shall deliver to the Holder a notice of such Fundamental Transaction at least thirty (30) days prior to the date such Fundamental Transaction is consummated. In the event any such notice pursuant to this Section 9(h) and the contents thereof shall be deemed to constitute material, non-public information, the Company shall (on the applicable time frames set forth herein) offer the Holder the ability to sign a confidentiality agreement related thereto in a form acceptable to the Holder sufficient to allow the Holder to receive such notice, and the Company shall deliver such notice immediately upon execution of such confidentiality agreement. If the Holder does not sign such confidentiality agreement, then the Holder shall not receive such notice. Holder agrees to maintain any material, non-public information disclosed pursuant to this Section 9(h) in confidence until such information is publicly available or in accordance with the applicable confidentiality agreement, and shall comply with applicable law with respect to trading in the Company's securities following receipt of any such information.

10. Payment of Exercise Price. Notwithstanding anything contained herein to the contrary, the Holder may, in its sole discretion, satisfy its obligation to pay the Exercise Price through a "cashless exercise," in which event the Company shall issue to the Holder the number of Warrant Shares in an exchange of securities effected pursuant to Section 3(a)(9) of the Securities Act, determined as follows:

$$X = Y [(A-B)/A]$$

where:

"X" equals the number of Warrant Shares to be issued to the Holder;

"Y" equals the total number of Warrant Shares with respect to which this Warrant is then being exercised;

“A” equals the Closing Sale Price of the shares of Common Stock (as reported by Bloomberg Financial Markets) as of the Trading Day on the date immediately preceding the Exercise Date; and

“B” equals the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in a “cashless exercise” transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the date this Warrant was originally issued (provided that the SEC continues to take the position that such treatment is proper at the time of such exercise).

In the event that a registration statement registering the issuance of the Warrant Shares is, for any reason, not effective at the time of exercise of this Warrant, then the Warrant may only be exercised through a cashless exercise, as set forth in this Section 10. Except as set forth in Section 5(b) (Buy-In remedy) and Section 12 (payment of cash in lieu of fractional shares), in no event will the exercise of this Warrant be settled in cash.

11. Limitations on Exercise.

(a) The Holder shall be prohibited from exercising this Warrant if, immediately prior to or following such exercise (or portion of such exercise thereof), the Holder, together with its Attribution Parties, beneficially owns or would beneficially own as determined in accordance with Section 13(d) of the Exchange Act more than 9.99% (the “Maximum Percentage”) of the issued and outstanding Common Stock or any other class of equity security (other than an exempted security) of the Company that is registered pursuant to Section 12 of the Exchange Act. For purposes of calculating beneficial ownership, the aggregate number of shares of Common Stock beneficially owned by the Holder, together with its Attribution Parties, shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which the determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (i) conversion of the remaining, unconverted portion of this Warrant beneficially owned by the Holder, together with its Attribution Parties, and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by the Holder, together with its Attribution Parties (including, without limitation, any convertible notes, convertible stock or warrants) that are subject to a limitation on conversion or exercise analogous to the limitation contained herein. For purposes of this Section 11(a), beneficial ownership shall be calculated and determined in accordance with Section 13(d) of the Exchange Act and the rules promulgated thereunder, it being acknowledged and agreed that the Holder is solely responsible for any schedules required to be filed in accordance therewith. For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (1) the Company’s most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the SEC, as the case may be, (2) a more recent public announcement by the Company or (3) any other written notice by the Company or the Company’s transfer agent setting forth the number of shares of Common Stock outstanding. For any reason at any time, upon the written request of the Holder, the Company shall within two (2) Business Days confirm to the Holder the number of shares of Common Stock then outstanding. The Holder shall disclose to the Company the number of shares of Common Stock that it, its Affiliates or any other Attribution Party owns and has the right to acquire through the exercise of derivative securities and any limitations on exercise or conversion analogous to the limitation contained herein contemporaneously or immediately prior to exercising this Warrant. Any purported delivery of any number of shares of Common Stock or any other security upon exercise of this Warrant shall be void and have no effect to the extent, but only to the extent, that before or after such delivery, the exercising Holder, together with its Affiliates and any other Attribution Party would have beneficial ownership in excess of the Maximum Percentage. By written notice to the Company, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 19.99% specified in such notice; provided that any increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is delivered to the Company.

(b) This Section 11 shall not restrict the number of shares of Common Stock which the Holder may receive or beneficially own in order to determine the amount of securities or other consideration that the Holder may receive in the event of a Fundamental Transaction as contemplated in Section 9(d) of this Warrant.

12. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the Closing Sale Price) for any such fractional shares; provided, however, the Company shall not be required to pay an amount for any fractional share less than \$100.

13. Notices. Whenever notice is required to be given under this Warrant, including, without limitation, an Exercise Notice, unless otherwise provided herein, such notice shall be given in writing, (i) if delivered (a) from within the domestic United States, by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, electronic mail or (b) from outside the United States, by internationally recognized overnight express courier, electronic mail, and (ii) will be deemed given (A) if delivered by first-class registered or certified mail domestic, three (3) Business Days after so mailed, (B) if delivered by nationally recognized overnight carrier, one (1) Business Day after so mailed, (C) if delivered by internationally recognized overnight express courier, two (2) Business Days after so mailed and (D) at the time of transmission, if delivered by electronic mail to the email address specified in this Section 13 prior to 5:00 p.m. (New York time) on a Trading Day, and (E) the next Trading Day after the date of transmission, if delivered by electronic mail to the email address specified in this Section 13 on a day that is not a Trading Day or later than 5:00 p.m. (New York time) on any Trading Day:

(i) If to the Company, to:

Vigil Neuroscience, Inc.
1 Broadway, 7th Floor
Suite 07-300
Cambridge, MA 02142
Attn: Christopher Verni, General Counsel

with a copy (which shall not constitute notice) to:

Goodwin Procter LLP
100 Northern Avenue
Boston, Massachusetts, 02210
Attn: Kingsley Taft
Jacqueline Mercier
Gabriela Morales-Rivera

(ii) if to the Holder, at such address or other contact information delivered by the Holder to Company or as is on the books and records of the Company.

14. Warrant Agent. The Warrant Agent shall initially serve as warrant agent under this Warrant. Upon ten (10) days' notice to the Holder, the Company may appoint a new warrant agent. Any entity into which the Warrant Agent or any new warrant agent may be merged or any entity resulting from any consolidation to which the Warrant Agent or any new warrant agent shall be a party or any entity to which the Warrant Agent or any new warrant agent transfers substantially all of its corporate trust or shareholders services business shall be a successor warrant agent under this Warrant without any further act. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

15. Miscellaneous.

(a) No Rights as a Stockholder. Except as otherwise set forth in this Warrant, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

(b) Authorized Shares.

(i) Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate or articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (a) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable the Company to perform its obligations under this Warrant.

(ii) Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(c) Successors and Assigns. Subject to compliance with applicable securities laws, this Warrant may be transferred or assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant. This Warrant may be amended only in writing signed by the Company and the Holder, or their successors and assigns.

(e) Amendment and Waiver. The provisions of the Warrants may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

(f) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

(g) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN (INCLUDING WITH RESPECT TO THE ENFORCEMENT OF ANY OF THE TRANSACTION DOCUMENTS), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON AT THE ADDRESS IN EFFECT FOR NOTICES TO IT AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

(h) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(i) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the Company and the Holder will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Company has caused this Pre-Funded Warrant to be duly executed as of the Original Issue Date set out above.

VIGIL NEUROSCIENCE, INC.

By: _____
Name: Ivana Magovčević-Liebisch
Title: President and Chief Executive Officer

SCHEDULE 1

FORM OF EXERCISE NOTICE

[To be executed by the Holder to purchase shares of Common Stock under the Warrant]

VIGIL NEUROSCIENCE, INC.

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. [•] (the "Warrant") issued by Vigil Neuroscience, Inc. a Delaware corporation (the "Company"). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase Warrant Shares pursuant to the Warrant.

(3) The Holder intends that payment of the Exercise Price shall be made as (check one):

Cash Exercise

"Cashless Exercise" under Section 10 of the Warrant

(4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$[•] in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant.

(6) By its delivery of this Exercise Notice, the undersigned represents and warrants to the Company that (i) it will not purchase or sell any securities, including the Warrant Shares, in violation of applicable securities laws and (ii) in giving effect to the exercise evidenced hereby the Holder will not beneficially own in excess of the number of shares of Common Stock (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) permitted to be owned under Section 11(a) of the Warrant to which this notice relates.

Dated: _____

Name of Holder: _____

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

ACKNOWLEDGMENT

The Company hereby acknowledges this Exercise Notice and hereby directs [], jointly as warrant agent, to issue the above indicated number of shares of Common Stock on or prior to the applicable Share Delivery Date.

VIGIL NEUROSCIENCE, INC.

By: _____

Name:

Title:

Schedule 2
ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this “*Agreement*”) is dated as of August 12, 2022 (the “*Effective Date*”), among Vigil Neuroscience, Inc., a Delaware corporation (the “*Company*”), and each purchaser identified on **Exhibit A** attached hereto (each a “*Purchaser*” and, collectively, the “*Purchasers*”).

WHEREAS, the Company and the Purchasers are executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act of 1933, as amended (the “*Securities Act*”) and/or Rule 506 of Regulation D promulgated thereunder.

WHEREAS, the Purchasers, severally and not jointly, wish to purchase from the Company, and the Company wishes to sell and issue to the Purchasers, upon the terms and subject to the conditions stated in this Agreement, shares (the “*Shares*”) of the Company’s Common Stock, par value \$0.0001 per share (the “*Common Stock*”) and/or pre-funded warrants to purchase Common Stock in the form attached hereto as **Exhibit B** (the “*Pre-Funded Warrants*”); and

WHEREAS, contemporaneously with the sale of the Shares and the Pre-Funded Warrants, the parties hereto will execute and deliver a Registration Rights Agreement, in the form attached hereto as **Exhibit C** (the “*Registration Rights Agreement*”), pursuant to which the Company will agree to provide certain registration rights in respect of the Shares and the Warrant Shares (as defined below) under the 1933 Act and applicable state securities laws.

NOW, THEREFORE, in consideration of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and each Purchaser, severally and not jointly, agree as follows:

1. DEFINITIONS

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, the following terms have the meanings set forth in this **Section 1.1**:

“*Affiliate*” means, with respect to any Person, any other Person which directly or indirectly through one or more intermediaries controls, is controlled by, or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act.

“*Closing*” means the closing of the purchase and sale of the Shares and/or the Pre-Funded Warrants on the Closing Date pursuant to **Section 2.1** of this Agreement.

“*Closing Date*” means August 16, 2022.

“*Commission*” means the United States Securities and Exchange Commission.

“*Common Stock Equivalents*” means any securities of the Company or any Subsidiary which would entitle the holder thereof to acquire, at any time, Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is, at any time, convertible into or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock or other securities that entitle the holder to receive, directly or indirectly, Common Stock.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“**GAAP**” means U.S. generally accepted accounting principles consistently applied.

“**Investment Company Act**” means the Investment Company Act of 1940, as amended.

“**Material Adverse Effect**” means a material adverse effect on (i) the performance of this Agreement or the timely consummation of any of the transactions contemplated hereby or (ii) the condition (financial or otherwise), earnings, results of operations, business, prospects or properties of the Company and the Subsidiaries (as defined below) taken as a whole.

“**Nasdaq**” means The Nasdaq Global Market.

“**Person**” means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

“**Rule 144**” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

“**SEC Reports**” means collectively all reports, schedules, forms, statements and other documents filed or furnished by the Company under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, since January 6, 2022 (including the exhibits thereto and documents incorporated by reference therein).

“**Securities**” means the Shares, Pre-Funded Warrants and Warrant Shares.

“**Short Sales**” means all “short sales” as defined in Rule 200 of Regulation SHO of the Exchange Act, but shall be deemed to not include the location and/or reservation of borrowable shares of Common Stock.

“**Subsidiaries**” means any subsidiary of the Company.

“**Trading Day**” means a day on which the Common Stock is traded on Principal Trading Market.

“**Transaction Documents**” means this Agreement, including the schedules and exhibits attached hereto, the Pre-Funded Warrants, and the Registration Rights Agreement, the Irrevocable Transfer Agent Instructions (as defined below) and any other documents or agreements executed and delivered to the Purchasers in connection with the transactions contemplated hereunder.

“**Warrant Shares**” means the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants.

2. PURCHASE AND SALE

2.1 Closing.

(a) At the Closing, upon the terms set forth herein, the Company hereby agrees to issue and sell to each Purchaser, and each Purchaser agrees to purchase from the Company, severally and not jointly, (i) the number of Shares set forth opposite such Purchaser's name on **Exhibit A** hereto, at a purchase price equal to \$7.30 per share of Common Stock and (ii) to the extent that a Purchaser determines, in its sole discretion, that such Purchaser (together with such Purchaser's Affiliates, and any Person acting as a group together with such Purchaser or any of such Purchaser's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation, or as such Purchaser may otherwise choose, a Pre-Funded Warrant to purchase the number of Warrant Shares set forth opposite the name of such Purchaser under the heading "Number of Warrant Shares Underlying Pre-Funded Warrant" on **Exhibit A** hereto, if any, at a purchase price equal to \$7.2999 and an exercise price equal to \$0.0001 per Warrant Share (subject to adjustment as set forth therein). The "Beneficial Ownership Limitation" shall be 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of the Shares on the Closing Date. A Purchaser may, upon notice to the Company, increase or decrease the Beneficial Ownership Limitation, provided that the Beneficial Ownership Limitation in no event exceeds 19.99% of the number of shares of the Common Stock outstanding at such time. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company.

(b) At the Closing, each Purchaser shall deliver to the Company via wire transfer of immediately available funds in accordance with wire instructions provided prior to the Closing Date by the Company to the Purchasers equal to the Aggregate Purchase Price set forth opposite such Purchaser's name on **Exhibit A** hereto and the Company shall deliver to each Purchaser its respective Shares and/or Pre-Funded Warrants in the amount set forth opposite such Purchaser's name on Exhibit A hereto, deliverable at the Closing on the Closing Date, in accordance with **Section 2.2** of this Agreement. The Closing shall take place remotely via the exchange of executed documents and funds at 10:00 a.m. (New York City Time) on the Closing Date or such other time and location as the parties shall mutually agree.

2.2 Deliveries.

(a) At or prior to the Closing, the Company will deliver deliver or cause to be delivered to each Purchaser (the "**Company Deliverables**"):

(i) this Agreement, duly executed by the Company;

(ii) certificate(s) or book-entry shares (as requested by such Purchaser) representing the Common Stock, purchased by such Purchaser, registered in such Purchaser's name. Such delivery shall be against payment of the Aggregate Purchase Price therefor by such Purchaser by wire transfer of immediately available funds to the Company in accordance with the Company's written wiring instructions; the Company shall deliver, or cause to be delivered, a book-entry statement evidencing the Shares as promptly as practicable and in any event no later than one Trading Day after the Closing. The Shares shall be delivered via a book-entry record through the Company's transfer agent or, if requested by a Purchaser, in certificated form. Unless the Company and a Purchaser otherwise mutually agree with respect to such Purchaser's Shares, at Closing settlement shall occur on a "delivery versus payment" basis;

(iii) the Registration Rights Agreement, duly executed by the Company;

(iv) for each Purchaser of Pre-Funded Warrants pursuant to Section 2.1(a), a Pre-Funded Warrant registered in the name of such Purchaser to purchase up to a number of shares of Common Stock equal to the portion of such Purchaser's Aggregate Purchase Price applicable to Pre-Funded Warrants divided by \$7.2999, with an exercise price equal to \$0.0001, subject to adjustment therein;

(v) an opinion of Goodwin Procter LLP, counsel for the Company, dated as of the Closing Date, in a form reasonably satisfactory to the Purchasers;

(vi) duly executed Irrevocable Transfer Agent Instructions (as defined below) as set forth in Section 4.9 hereto instructing the Company's transfer agent to deliver a book-entry statement evidencing the number of shares of Common Stock equal to such Purchaser's Shares; and

(vii) the Company shall have provided each Purchaser in writing with the Company's wire instructions, on Company letterhead and executed by the Chief Executive Officer or Chief Financial Officer.

(b) At or prior to the Closing, each Purchaser will deliver or cause to be delivered to the Company (the "**Purchaser Deliverables**"):

(i) this Agreement, duly executed by such Purchaser;

(ii) the Registration Rights Agreement, duly executed by such Purchaser; and

(iii) its Aggregate Purchase Price in accordance with Section 2.1.

2.3 Closing Conditions.

(a) The obligation of each Purchaser to purchase and acquire Securities at the Closing is subject to the fulfillment to such Purchaser's satisfaction, on or prior to the Closing Date, of each of the following conditions, any of which may be waived in writing by such Purchaser (as to itself only):

(i) the representations and warranties of the Company contained herein shall be true and correct in all material respects (except for those representations and warranties which are qualified as to materiality or Material Adverse Effect, in which case such representations and warranties shall be true and correct in all respects) as of the date when made and as of the Closing Date, as though made on and as of such date, except for such representations and warranties that speak as of a specific date which shall be true and correct in all material respects (except for those representations and warranties which are qualified as to materiality or Material Adverse Effect, in which case such representations and warranties shall be true and correct in all respects) as of such date;

(ii) all obligations, covenants and agreements of the Company (with respect to the obligations of the Purchasers) required to be performed at or prior to the Closing Date shall have been performed, satisfied and complied with in all material respects;

(iii) no statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction that prohibits the consummation of any of the transactions contemplated by the Transaction Documents;

(iv) the Company shall have obtained in a timely fashion any and all consents, permits, approvals, registrations and waivers necessary for consummation of the purchase and sale of the Securities, all of which shall be and remain so long as necessary in full force and effect;

(v) the Company shall have delivered the Company Deliverables in accordance with Section 2.2(a); and

(vi) since the date hereof, no event or circumstance or series of events or circumstances shall have occurred that has had or would reasonably be expected to have a Material Adverse Effect.

(b) The Company's obligation to sell and issue the Securities at the Closing to each Purchaser is subject to the fulfillment to the satisfaction of the Company on or prior to the Closing Date of the following conditions, any of which may be waived by the Company:

(i) the representations and warranties made by such Purchaser contained herein shall be true and correct in all material respects (except for those representations and warranties which are qualified as to materiality, in which case such representations and warranties shall be true and correct in all respects) as of the date when made, and as of the Closing Date as though made on and as of such date, except for representations and warranties that speak as of a specific date;

(ii) all obligations, covenants and agreements of such Purchaser required to be performed at or prior to the Closing Date shall have been performed, satisfied and complied with in all material respects;

(iii) no statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction that prohibits the consummation of any of the transactions contemplated by the Transaction Documents; and

(iv) such Purchaser shall have delivered the Purchaser Deliverables in accordance with Section 2.2(b).

3. REPRESENTATIONS AND WARRANTIES

3.1 Representations and Warranties of the Company. The Company represents and warrants to the Purchasers that the statements contained in this **Section 3.1** are true and correct as of the date hereof and as of the Closing Date (except for the representations and warranties that speak as of a specific date, which shall be made as of such date):

(a) The Company was not and is not an Ineligible Issuer (as defined in Rule 405 under the Securities Act), without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an Ineligible Issuer and is not, and has never been, an issuer identified in, or subject to, Rule 144(i)(1) of the Securities Act.

(b) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with full corporate power and authority to own, lease and operate its properties and conduct its business, to execute and deliver this Agreement and to issue, sell and deliver the Securities as contemplated herein.

(c) The Company is duly qualified to do business as a foreign corporation and is in good standing in the Commonwealth of Massachusetts, which is the only jurisdiction where the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified and in good standing would not, individually or in the aggregate, have a Material Adverse Effect.

(d) The authorized capital stock of the Company consists of 150,000,000 shares of Common Stock and 10,000,000 shares of undesignated preferred stock, par value \$0.001 per share (the "**Preferred Stock**"). As of August 12, 2022, there are no shares of Preferred Stock issued and outstanding and there are 28,268,563 shares of Common Stock issued and outstanding, of which no shares are owned by the Company. There are no other shares of any other class or series of capital stock of the Company issued or outstanding. There are no outstanding options, rights (including conversion or preemptive rights and rights of first refusal), proxy or shareholder agreements, or agreements of any kind for the purchase or acquisition from the Company of any of its securities. The Company has an authorized capitalization as set forth in the SEC Reports, and all of the issued shares of the Company have been duly authorized and validly issued, are fully paid and non-assessable, conform in all material respects to the description thereof contained in the SEC Reports and were not issued in violation of any preemptive right, resale right, right of first refusal or similar right. All of the Company's options and other rights to purchase or exchange any securities for shares of the Company's capital stock have been duly authorized and validly issued, and conform in all material respects to the description thereof contained in the SEC Reports. All of the issued shares of capital stock or other ownership interests of each Subsidiary of the Company have been duly authorized and validly issued, are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims, except for such liens, encumbrances, equities or claims as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. No Person is entitled to preemptive rights, rights of first refusal, rights of participation or similar rights with respect to any securities of the Company, including with respect to the issuance of Securities contemplated hereby.

(e) The Company has no Subsidiaries other than Vigil Securities Corporation. The Company owns all of the issued and outstanding capital stock and ownership interests of the Subsidiaries. Other than the capital stock and ownership interests of the Subsidiaries, the Company does not own, directly or indirectly, any shares of stock or any other equity interests or long-term debt securities of any corporation, firm, partnership, joint venture, association or other entity. Each of the Subsidiaries has been duly incorporated and is validly existing as a corporation and is in good standing under the laws of the Commonwealth of Massachusetts, with full corporate power and authority to own, lease and operate its properties and to conduct its business; each Subsidiary is duly qualified to do business as a foreign corporation and is in good standing in each jurisdiction where the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified and in good standing would not, individually or in the aggregate, have a Material Adverse Effect; all of the outstanding shares of capital stock and ownership interests of the Subsidiaries have been duly authorized and validly issued, are fully paid and non-assessable, have been issued in compliance with all applicable securities laws, were not issued in violation of any preemptive right, resale right, right of first refusal or similar right and are owned by the Company subject to no security interest, other encumbrance or adverse claims; and no options, warrants or other rights to purchase, agreements or other obligations to issue or other rights to convert any obligation into shares of capital stock or ownership interests in the Subsidiaries are outstanding.

(f) The Shares and Pre-Funded Warrants have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued, fully paid and non-assessable and free and clear of all liens, other than restrictions on transfer provided for in the Transaction Documents or imposed by applicable securities laws; and the issuance of the Shares and Pre-Funded Warrants is not subject to any preemptive or similar rights that have not been duly waived or satisfied. The Warrant Shares have been duly and validly authorized and, when issued in accordance with the terms of the Pre-Funded Warrants, including upon the payment of any exercise price therefor, will be validly issued, fully paid and non-assessable and will be free and clear of all encumbrances and restrictions (other than those created by the Purchaser), except for restrictions on transfer set forth in the Transaction Documents or imposed by applicable securities laws. The Company has reserved from its duly authorized share capital the maximum number of Common Stock issuable pursuant to this Agreement and the Pre-Funded Warrants. Assuming the accuracy of the representations and warranties of each Purchaser in Section 4 hereof, the Warrant Shares will be issued in compliance with all applicable federal and state securities laws.

(g) Each of the Transaction Documents has been duly authorized, executed and delivered by the Company and constitutes the lawful, valid and legally binding obligation of the Company, enforceable in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and as limited by general equitable principles.

(h) Neither the Company nor its Subsidiaries is, and the issuance and sale of the Securities, the execution, delivery and performance of the Transaction Documents to which the Company is a party and the consummation of the transactions contemplated by the Transaction Documents will not cause the Company or its Subsidiaries to be, (i) in violation of its charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with

notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or its Subsidiaries are a party or by which the Company or its Subsidiaries are bound or to which any property or asset of the Company or its Subsidiaries are subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of clauses (ii) and (iii) above, for any such default or violation that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(i) The Company is not, and after giving effect to the offering and sale of the Securities and the application of the proceeds thereof will not be, required to register as an “investment company” as such term is defined in the Investment Company Act of 1940, as amended.

(j) The execution and delivery by the Company of, and the performance by the Company of its obligations under, the Transaction Documents will not contravene any provision of (i) applicable law, (ii) the certificate of incorporation or by-laws of the Company, (iii) any agreement or other instrument binding upon the Company or any of its Subsidiaries that is material to the Company and its Subsidiaries, taken as a whole, or (iv) any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Company or any Subsidiary, except that, in the case of clause (i) and (iii), such contravention would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect, and no consent, approval, authorization or order of, or qualification with, any governmental body, agency or court is required for the performance by the Company of its obligations under this Agreement, except such as may be required by the securities or Blue Sky laws of the various states in connection with the offer and sale of the Securities.

(k) No consent, approval, authorization, order, registration or qualification of or with any court or arbitrator or governmental or regulatory authority is required for the execution, delivery and performance by the Company of the Transaction Documents, the issuance and sale of the Securities and the consummation of the transactions contemplated by the Transaction Documents, other than (i) any necessary qualification under the securities or blue sky laws of the various jurisdictions in which the Securities are being offered, (ii) any listing applications and related consents (which, for avoidance of doubt, does not include any consent of the Company’s stockholders) or any notices required by Nasdaq in the ordinary course of the offering of the Securities, (iii) filings with the Commission under the Securities Act contemplated by this Agreement or the Registration Rights Agreement or (iv) filings with the Commission on Form 8-K with respect to the Transaction Documents.

(l) No person has the right to require the Company or any of its Subsidiaries to register any securities for sale under the Securities Act by reason of the issuance and sale of the Securities, other than those rights that have been validly waived.

(m) The Company and its Subsidiaries possess all licenses, sub-licenses, certificates, permits and other authorizations issued by, and have made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses, except where the failure to possess or make the same would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and neither the Company nor its Subsidiaries have received written notice of any revocation or modification of any such license, sub-license, certificate, permit or authorization or has any reason to believe that any such license, sub-license, certificate, permit or authorization will not be renewed in the ordinary course, except where such revocation, modification, or non-renewal would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(n) The Company has filed all SEC Reports required to be filed or furnished by the Company on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension, except in the case of current reports on Form 8-K where the failure to file on a timely basis would not have or reasonably be expected to result in a Material Adverse Effect or the Company's ability to utilize SEC Form S-3. As of their respective filing dates, or to the extent corrected by a subsequent restatement, the SEC Reports conformed in all material respects to the requirements of the Securities Act and the Exchange Act and the rules and regulations of the Commission promulgated thereunder, and none of the SEC Reports, when filed with the Commission, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. There are no contracts or other documents required to be described in the SEC Reports or filed as exhibits to the SEC Reports pursuant to Item 601 of Regulation S-K that are not described and filed as required. The statements made in the SEC Reports, insofar as they purport to constitute summaries of the terms of the contracts and other documents described and filed pursuant to Item 601 of Regulation S-K, constitute accurate summaries of the terms of such contracts and documents in all material respects. Except as disclosed in the SEC Reports, neither the Company nor its Subsidiary has knowledge that any other party to any such contract or other document filed pursuant to Item 601 of Regulation S-K has any intention not to render full performance as contemplated by the terms thereof.

(o) No relationship, direct or indirect, exists between or among the Company or its Subsidiaries, on the one hand, and the directors, officers, stockholders, customers or suppliers of the Company or its Subsidiaries, on the other, that is required by the Securities Act to be described in the SEC Reports and that is not so described in such documents.

(p) The financial statements (including the related notes thereto) of the Company and its consolidated Subsidiaries included or incorporated by reference in the SEC Reports comply in all material respects with the applicable requirements of the Securities Act and the Exchange Act, as applicable, and present fairly in all material respects the financial position of the Company and its consolidated Subsidiaries as of the dates indicated and the results of their operations and the changes in their cash flows for the periods specified; such financial statements have been prepared in conformity with GAAP in the United States applied on a consistent basis throughout the periods covered thereby, except in the case of unaudited financial statements, which are subject to normal year-end adjustments and do not contain certain footnotes as permitted by the applicable rules of the Commission; and any supporting schedules included or incorporated by reference in the SEC Reports present fairly in all material respects the information required to be stated therein; and the other financial information included or incorporated by reference in the SEC

Reports has been derived from the accounting records of the Company and its consolidated Subsidiaries and presents fairly in all material respects the information shown thereby. There are no financial statements (historical or pro forma) that are required to be included in the SEC Reports that are not so included as required.

(q) Except as described in the SEC Reports, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings (“*Actions*”) pending to which the Company or its Subsidiaries are or may reasonably be expected to become a party or to which any property of the Company or its Subsidiaries are or may reasonably be expected to become the subject that, individually or in the aggregate, if determined adversely to the Company or its Subsidiaries, would reasonably be expected to have a Material Adverse Effect; to the knowledge of the Company, no such Actions are threatened or contemplated by any governmental or regulatory authority; and (i) there are no current or pending Actions that are required under the Securities Act to be described in the SEC Reports that are not so described in the SEC Reports and (ii) there are no statutes, regulations or contracts or other documents that are required under the Securities Act to be filed as exhibits to the SEC Reports that are not so filed as exhibits to the SEC Reports or described in the SEC Reports.

(r) PriceWaterhouseCoopers LLP, who have certified certain financial statements of the Company and its Subsidiaries and delivered its report with respect to the audited consolidated financial statements and schedules filed with the Commission as part of the SEC Reports, is an independent registered public accounting firm with respect to the Company within the meaning of the Securities Act and the applicable rules and regulations thereunder adopted by the Commission and the Public Company Accounting Oversight Board (United States).

(s) Since the date of the most recent financial statements of the Company included or incorporated by reference in the SEC Reports, (i) there has not been any change in the capital stock (other than the issuance of shares of Common Stock upon exercise of stock options and warrants described as outstanding in, and the grant of options and awards under existing equity incentive plans described in, the SEC Reports), short-term debt or long-term debt of the Company or its Subsidiaries, or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock, or any material adverse change, or any development that would reasonably be expected to result in a prospective material adverse change, in or affecting the business, properties, management, financial position, stockholders’ equity, results of operations or prospects of the Company and its Subsidiaries taken as a whole; (ii) neither the Company nor its Subsidiaries has entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company and its Subsidiaries taken as a whole or incurred any liability or obligation, direct or contingent, that is material to the Company and its Subsidiaries taken as a whole; and (iii) neither the Company nor its Subsidiaries has sustained any loss or interference with its business that is material to the Company and its Subsidiaries taken as a whole and that is either from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor disturbance or dispute or any action, order or decree of any court or arbitrator or governmental or regulatory authority, except in each case as otherwise disclosed in the SEC Reports.

(t) The Company and its Subsidiaries own, or have valid rights to lease or otherwise use, all items of real and personal property that are material to the respective businesses of the Company and its Subsidiaries, in each case, free and clear of all liens, encumbrances, claims and defects and imperfections of title except those that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and its Subsidiaries or (ii) could not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

(u) The Company owns or has obtained valid and enforceable licenses for the inventions, patents, patent applications, trademarks, trade names, service names, copyrights, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information) and other intellectual property described in the SEC Reports as being owned or licensed by it or which are necessary for the conduct of its business as currently conducted or as currently proposed to be conducted (with respect to the development and commercialization of the product candidates described in the SEC Reports, except where the failure to own or license such rights would not, individually or in the aggregate, have a Material Adverse Effect) (collectively, "**Intellectual Property**"), and to the Company's knowledge the conduct of its business does not infringe, misappropriate or otherwise conflict in any material respect with any such rights of others. The Intellectual Property of the Company is subsisting, free and clear of all material liens and encumbrances, and has not been adjudged by a court of competent jurisdiction to be invalid or unenforceable, in whole or in part and the Company is unaware of any facts which would form a reasonable basis for any such adjudication. To the Company's knowledge, there are no third parties who have rights to any Intellectual Property, except for any customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed in the SEC Reports as licensed to the Company; and, to the Company's knowledge, there is no infringement by third parties of any Intellectual Property. Other than as disclosed in the SEC Reports, the Company is not obligated to pay any royalty, grant a license or provide other consideration to any third party in connection with the Intellectual Property or in connection with the manufacture, use or sale of any of the Company's product candidates. There is no pending or threatened action, suit, proceeding or claim by others: (A) challenging the Company's rights in or to any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property, and except as described in the SEC Reports, the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company infringes, misappropriates, or otherwise violates, or would, upon the commercialization of any product or service described in the SEC Reports as under development, infringe, misappropriate or violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; in each case of (A) – (C) which could be expected, individually or in the aggregate, to have a Material Adverse Effect. The Company has complied in all material respects with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company, and all such agreements are in full force and effect. To the Company's knowledge, there are no defects in any of the patents or patent applications included in the Intellectual Property that are material to the Company. The Company has taken commercially reasonable steps to protect, maintain and safeguard its Intellectual Property, including the execution of appropriate nondisclosure, confidentiality agreements and invention assignment agreements and invention assignments with its employees or consultants, and, to the Company's knowledge, no employee of the Company or consultant is in or has been in violation of any material term of any employment contract, patent disclosure agreement, invention

assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement, or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company. The duty of candor and good faith as required by the United States Patent and Trademark Office during the prosecution of the United States patents and patent applications included in the Intellectual Property have been complied with; and in all foreign offices having similar requirements, all such requirements have been complied with. The product candidates described in the SEC Reports as under development by the Company fall within the scope of the claims of one or more patents or pending patent applications owned by, or exclusively licensed to, the Company.

(v) The Company and its Subsidiaries use and have used any and all software and other materials distributed under a "free," "open source," or similar licensing model (including but not limited to the MIT License, Apache License, GNU General Public License, GNU Lesser General Public License and GNU Affero General Public License) ("**Open Source Software**") in compliance with all license terms applicable to such Open Source Software; and neither the Company nor any of its Subsidiaries uses or distributes or has used or distributed any Open Source Software in any manner that requires or has required (A) the Company or any of its Subsidiaries to permit reverse engineering of any software code or other technology owned by the Company or any of its Subsidiaries or (B) any software code or other technology owned by the Company or any of its Subsidiaries to be (1) disclosed or distributed in source code form, (2) licensed for the purpose of making derivative works or (3) redistributed at no charge.

(w) Since its inception, (i) the Company and each of its Subsidiaries have complied and are presently in compliance in material respects with all internal and externally published privacy policies, contractual obligations, applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority and any other legal obligations, in each case, relating to the collection, use, transfer, import, export, storage, protection, disposal and disclosure by the Company or any of its Subsidiaries of any personally identifiable information ("**Data Security Obligations**"), and such data, "**Data**"), (ii) the Company has not received any written notification, or, to the Company's knowledge, any oral notification, of or complaint regarding non-compliance with any Data Security Obligation; and (iii) there is no action, suit or proceeding by or before any court or governmental agency, authority or body pending or, to the Company's knowledge, threatened, alleging non-compliance with any Data Security Obligation.

(x) The Company and each of its Subsidiaries have taken all reasonable technical and organizational measures designed to protect the information technology systems and Data used in connection with the operation of the Company's and its Subsidiaries' businesses. Without limiting the foregoing, the Company and its Subsidiaries have used reasonable efforts to establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any information technology system or Data used in connection with the operation of the Company's and its Subsidiaries' businesses ("**Breach**"). To the Company's knowledge, there has been no such Breach, and the Company and its Subsidiaries have no knowledge of any event or condition that would reasonably be expected to result in, any such Breach.

(y) No material labor dispute with the employees of the Company or any of its Subsidiaries exists, or, to the knowledge of the Company, is imminent; and the Company is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers or contractors that could, singly or in the aggregate, have a Material Adverse Effect.

(z) The Company and each of its Subsidiaries possess, and are in material compliance with the terms of, all applications, certificates, approvals, registrations, licenses, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct their respective businesses (collectively, "**Permits**"). All Permits are in full force and effect and neither the Company nor any of its Subsidiaries is in violation of any term of any Permit in any material respect. Each of the Company and its Subsidiaries has fulfilled and performed all of its respective obligations with respect to the Permits in all material respects and, to the knowledge of the Company, no event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other impairment of the rights of the holder of any Permit. Neither the Company nor any of its Subsidiaries has received any written notice, or, to the Company's knowledge, any oral notice, of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to have a Material Adverse Effect.

(aa) The Company and each of its Subsidiaries (i) are in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("**Environmental Laws**"), (ii) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) are in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect. There are no costs or liabilities associated with Environmental Laws (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties) which would, singly or in the aggregate, reasonably be expected have a Material Adverse Effect.

(bb) The Company and each of its Subsidiaries have filed all U.S. federal, state, local and non-U.S. tax returns required to be filed through the date of this Agreement or have requested extensions thereof (except where the failure to file would not, singly or in the aggregate, have a Material Adverse Effect) and have paid all taxes required to be paid thereon (except for cases in which the failure to file or pay would not, singly or in the aggregate, have a Material Adverse Effect, or, except as currently being contested in good faith and for which reserves required by U.S. GAAP have been created in the financial statements of the Company), and no tax deficiency has been determined adversely to the Company or any of its Subsidiaries which, singly

or in the aggregate, has had (nor does the Company nor any of its Subsidiaries have any notice or knowledge of any tax deficiency which could reasonably be expected to be determined adversely to the Company or its Subsidiaries and which could reasonably be expected to have) a Material Adverse Effect.

(cc) The Company and each of its Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as in the Company's reasonable judgment are prudent and customary in the businesses in which they are engaged; neither the Company nor any of its Subsidiaries has been refused any insurance coverage sought or applied for; and neither the Company nor any of its Subsidiaries has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(dd) The Company and its Subsidiaries have insurance covering their respective properties, operations, personnel and businesses, including business interruption insurance, which insurance is in amounts and insures against such losses and risks which the Company reasonably believes are adequate to protect the Company and its Subsidiaries and their respective businesses; and neither the Company nor its Subsidiaries have (i) received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance or (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business.

(ee) The Company and its Subsidiaries maintain systems of "internal control over financial reporting" (as defined in Rule 13a-15(f) of the Exchange Act) that have been designed to comply with the requirements of the Exchange Act and have been designed by, or under the supervision of, their respective principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company and its Subsidiaries maintain internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) interactive data in eXtensible Business Reporting Language included or incorporated by reference in the SEC Reports fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto. Except as disclosed in the SEC Reports, there are no material weaknesses in the Company's internal controls. The Company's auditors and the Audit Committee of the Board of Directors of the Company have been advised of: (i) all significant deficiencies and material weaknesses, if any, in the design or operation of internal controls over financial reporting which have adversely affected or are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and (ii) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls over financial reporting.

(ff) The Company and its Subsidiaries maintain an effective system of “disclosure controls and procedures” (as defined in Rule 13a-15(e) of the Exchange Act) that has been designed to comply with the requirements of the Exchange Act and that has been designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission’s rules and forms, including controls and procedures designed to ensure that such information is accumulated and communicated to the Company’s management as appropriate to allow timely decisions regarding required disclosure. The Company and its Subsidiaries have carried out evaluations of the effectiveness of their disclosure controls and procedures as required by Rule 13a-15 of the Exchange Act.

(gg) None of the Company or any of its Subsidiaries or Affiliates, or any director, officer, or employee thereof, or, to the Company’s knowledge, any agent or representative of the Company or of any of its Subsidiaries or Affiliates, has taken or will take any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment, giving or receipt of money, property, gifts or anything else of value, directly or indirectly, to any government official (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) in order to influence official action, or to any person in violation of any applicable anti-corruption laws; (ii) the Company and each of its Subsidiaries and Affiliates have conducted their businesses in compliance with applicable anti-corruption laws and have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; and (iii) neither the Company nor any of its Subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-corruption laws.

(hh) The operations of the Company and each of its Subsidiaries are and have been conducted at all times in material compliance with all applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of jurisdictions where the Company and each of its Subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “*Anti-Money Laundering Laws*”), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its Subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(ii) (i) None of the Company, any of its Subsidiaries, or any director, officer, or employee thereof, or, to the Company's knowledge, any agent, Affiliate or representative of the Company or any of its Subsidiaries, is a Person that is, or is owned or controlled by one or more Persons that are: (A) the subject of any sanctions administered or enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control, the United Nations Security Council, the European Union, Her Majesty's Treasury, or other relevant sanctions authority (collectively, "**Sanctions**"); or (B) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, Crimea, the so-called People's Republics of Luhansk and Donetsk in the Ukraine, Cuba, Iran, North Korea and Syria). (ii) The Company will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any Subsidiary, joint venture partner or other Person: (A) to fund or facilitate any activities or business of or with any Person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions; or (B) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise). (iii) The Company and each of its Subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(jj) The Company (i) is and has, since its inception, been in material compliance with all statutes, rules, regulations and policies applicable to the conduct of its business, including, but not limited to, the ownership, research, testing, development, registration, licensure, application approval, manufacture, packaging, labeling, processing, use, distribution, marketing, advertising, promotion, sale, offer for sale, recordkeeping, filing of reports, storage, import, export or disposal of any product candidate under development by the Company, including, without limitation, Title XVIII of the Social Securities Act, 42 U.S.C. §§ 1395-1395hhh; Title XIX of the Social Security Act, 42 U.S.C. §§ 1396-1396v; the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b); the civil False Claims Act, 31 U.S.C. §§ 3729 et seq.; the criminal False Claims Act, 42 U.S.C. § 1320a-7b(a); any criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. §§ 286 and 287 and the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996, 42 U.S.C. §§ 1320d et seq.; the Civil Monetary Penalties Law, 42 U.S.C. § 1320a-7a; the Federal Food, Drug, and Cosmetic Act ("**FDCA**"), 21 U.S.C. §§ 301 et seq.; the Public Health Service Act, 42 U.S.C. §§ 201 et seq.; the Patient Protection and Affordable Care Act of 2010 (Pub. Law 111-148), as amended by the Health Care and Education Reconciliation Act of 2010 (Pub. Law 111-152); and any similar foreign, federal, state and local laws and regulations relating to the same (collectively, the "**Regulatory Laws**"); (ii) has not received any U.S. Food and Drug Administration ("**FDA**") Form 483, notice of adverse finding, warning letter, untitled letter or other communication or notice from FDA or similar foreign, state and local governmental or regulatory authorities (collectively, the "**Regulatory Authorities**"), alleging or asserting non-compliance with any Regulatory Laws or any licenses, exemptions, certificates, approvals, consents, clearances, authorizations, permits, registrations and supplements or amendments thereto required by any such Regulatory Laws or Regulatory Authorities ("**Regulatory Authorizations**"); (iii) has not received any written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Regulatory Authority or any court or arbitrator or governmental authority or third party alleging or asserting non-compliance with any Regulatory Laws or Regulatory Authorizations, nor, to the knowledge of the Company, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action or communication being considered or threatened; (iv) possesses all material Regulatory Authorizations, and such Regulatory Authorizations are valid and in full force and effect and is not in violation of any material term of

any such Regulatory Authorizations; (v) has not received written notice that any Regulatory Authority or court or arbitrator or governmental authority has taken, is taking or intends to take action to materially limit, suspend, materially modify or revoke any Regulatory Authorizations nor, to the knowledge of the Company, is any such limitation, suspension, modification or revocation threatened; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Regulatory Laws or Regulatory Authorizations and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission) and no material deficiencies regarding compliance with Regulatory Laws have been asserted by Regulatory Authorities with respect to any such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments; and (vii) is not a party to any corporate integrity agreements, deferred prosecution or non-prosecution agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or Regulatory Authority.

(kk) The preclinical studies and clinical trials conducted by or on behalf of or sponsored by the Company, or in which the Company has participated, with respect to the Company's product candidates, including any studies and trials that are described in the Company's SEC Reports, or are intended to be submitted to the Regulatory Authorities (collectively, "*Company Trials*"), were and, if ongoing, are being, conducted in all material respects in accordance with the protocols, procedures, and controls established for each such Company Trial, and with all Regulatory Laws including, without limitation, the FDCA and its implementing regulations at 21 C.F.R. Parts 50, 54, 56, 58, and 312; (ii) the descriptions in the SEC Reports of the results of the Company Trials are accurate and complete in all material respects and fairly present the data derived from such Company Trials; (iii) the Company has no knowledge of any other trials the results of which are inconsistent with or otherwise could reasonably be expected to discredit or call into question the results described or referred to in the SEC Reports; (iv) except as disclosed in the SEC Reports, the Company has not received any written notices, correspondence or other communication from any Regulatory Authority or any other governmental agency or any institutional review board or ethics committee, or other similar entity, which could lead to the termination, suspension, material modification or partial or full clinical hold of any Company Trial and, to the knowledge of the Company, there are no reasonable grounds for the same; (v) no investigational new drug application or comparable submission filed by or on behalf of the Company with the FDA has been terminated or suspended by the FDA or any other Regulatory Authority; (vi) the Company has obtained (or caused to be obtained) informed consent by or on behalf of each human subject who participated in a Company Trial; and (vii) in using or disclosing patient information received by the Company in connection with a Company Trial, the Company has complied in all material respects with all applicable laws and regulatory rules or requirements, including, without limitation, HIPAA and the rules and regulations thereunder.

(ll) Neither the Company nor, to the knowledge of the Company, any of its officers, directors or managing employees (as defined in 42 U.S.C. § 1320a-5(b)), is or has been excluded, suspended or debarred from participation in any national or regional health care program, debarred by Regulatory Authorities pursuant to 21 U.S.C. § 335a or similar laws, or made subject to any pending or, to the knowledge of the Company, threatened or contemplated action or engaged in any conduct which could reasonably be expected to result in such exclusion, suspension or debarment.

(mm) To the knowledge of the Company, the manufacturing facilities and operations of its suppliers are operated in compliance in all material respects with all Regulatory Laws to the extent such activities relate to the Company's product candidates.

(nn) The Company's Common Stock is registered pursuant to Section 12(b) of the Exchange Act and listed on Nasdaq; the Company has taken no action designed to, or reasonably likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq, nor has the Company received any notification that the Commission or FINRA is contemplating terminating such registration or listing. The Company has not, in the 12 months preceding the date hereof, received notice from Nasdaq or any trading market on which the shares of Common Stock are or have been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirement of such trading market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock currently eligible for electronic transfer through the Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees to the Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.

(oo) Neither the Company, nor any of its Affiliates, nor any Person acting on its behalf, has engaged in any form of general solicitation or general advertising (within the meaning of Regulation D) in connection with the offer or sale of the Securities. The Company acknowledges that it has engaged the Placement Agent (as defined below) in connection with the sale of the Securities. Other than the Placement Agent, the Company has not engaged any placement agent or other agent in connection with the sale of the Securities. The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by the Transaction Documents.

(pp) Except as contemplated by the Registration Rights Agreement, neither the Company, nor any of its Affiliates, nor any Person acting on its behalf, has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would require registration of any of the Securities under the Securities Act or cause the offering of the Securities to be integrated with prior offerings by the Company for purposes of the Securities Act or the shareholder approval requirements of Nasdaq. Except for the Registration Rights Agreement, none of the Company, nor any of its Affiliates, nor any Person acting on its behalf, will take any action or steps referred to in the preceding sentence that would require registration of the offer, issuance or sale of any of the Securities under the Securities Act or cause the offering of the Securities to be integrated with other offerings.

(qq) In connection with the offer and sale of Securities to "non-U.S. person" as defined under Regulation S of the Securities Act, none of the Company, its Affiliates nor any Person acting on its or their behalf (other than the Placement Agent in connection with this Agreement) has engaged or will engage in any directed selling efforts (as that term is defined in Regulation S) with respect to the Securities and each of the Company, its Affiliates and any person acting on its or their behalf (other than the Placement Agent in connection with this Agreement) has complied and will comply with the offering restrictions requirement of Regulation S.

(rr) The Company has not sold or issued any security of the same or similar class or series as the Common Stock or any security convertible into the Common Stock during the six-month period preceding the Closing Date, including any sales pursuant to Rule 144A or Regulation D (other than shares issued pursuant to employee benefit plans, qualified stock options plans or other employee compensation plans or pursuant to outstanding options, rights or warrants). As used in this paragraph, the terms “offer” and “sale” have the meanings specified in Section 2(a)(3) of the Securities Act.

(ss) The Company will not offer or sell any of the Securities to any person whom it reasonably believes is not (i) a “qualified institutional buyer” as defined in Rule 144A; (ii) an institutional “accredited investor” (as defined in clauses (1), (2), (3) and (7) of Rule 501(a) of Regulation D); or (iii) a non-U.S. person as defined under Regulation S of the Securities Act.

(tt) The Company does not and will at no time have any agreement or understanding (in a side letter or otherwise) with any Purchaser with respect to the transactions contemplated by the Transaction Documents other than as specified in the Transaction Documents or any written agreement regarding the confidentiality and use of confidential information.

(uu) Assuming the accuracy of the Purchasers’ representations and warranties set forth in **Section 3.2** of this Agreement and except as set forth in the Registration Rights Agreement, no registration under the Securities Act is required for the offer and sale of the Securities by the Company to the Purchasers hereunder. The issuance and sale of the Securities hereunder does not contravene the rules and regulations of Nasdaq.

(vv) There is and has been no failure on the part of the Company or, to the knowledge of the Company, any of the Company’s directors or officers, in their capacities as such, to comply with any provisions of the Sarbanes-Oxley Act that are applicable to the Company or its directors or officers in their capacities as directors or officers of the Company.

(ww) The Company confirms that it has not provided, and to the knowledge of the Company, none of its officers or directors nor any other Person acting on its or their behalf has provided, and it has not authorized the Placement Agent to provide, any Purchaser or its respective agents or counsel with any information that it believes constitutes material, non-public information regarding the Company or its Subsidiary except (i) insofar as the existence, provisions and terms of the Transaction Documents and the proposed transactions hereunder may constitute such information, all of which will be disclosed by the Company in the Disclosure Document (as defined below) or (ii) to such Purchaser, prior to such disclosure, that has executed a written agreement regarding the confidentiality and use of such information. All of the disclosure furnished by or on behalf of the Company to the Purchasers regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby is true and correct and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement taken as a whole do not contain any untrue statement of a

material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and agrees that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.2 hereof. The Company understands and confirms that the Purchasers will rely on the foregoing representations in effecting transactions in securities of the Company.

(xx) The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm's-length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by any Purchaser or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchasers' purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

(yy) Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Securities hereunder, (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The SEC Reports set forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments. For the purposes of this Agreement, "Indebtedness" means (x) any liabilities for borrowed money or amounts owed in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company's consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP. Neither the Company nor any Subsidiary is in default with respect to any Indebtedness. The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date.

(zz) Anything in this Agreement or elsewhere herein to the contrary notwithstanding, it is understood and acknowledged by the Company that: (i) none of the Purchasers has been asked by the Company to agree, nor has any Purchaser agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or “derivative” securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) past or future open market or other transactions by any Purchaser, specifically including, without limitation, Short Sales or “derivative” transactions, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Company’s publicly-traded securities; (iii) any Purchaser, and counter-parties in “derivative” transactions to which any such Purchaser is a party, directly or indirectly, presently may have a “short” position in the Securities, and (iv) each Purchaser shall not be deemed to have any affiliation with or control over any arm’s length counter-party in any “derivative” transaction. The Company further understands and acknowledges that (y) one or more Purchasers may engage in hedging activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value of the Warrant Shares deliverable with respect to the Pre-Funded Warrants are being determined, and (z) such hedging activities (if any) could reduce the value of the existing shareholders’ equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.

(aaa) The Company and its controlled Affiliates have not taken, directly or indirectly, any action designed to or that has constituted or that could reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company in connection with the offering of the Securities.

(bbb) With respect to the Securities to be offered and sold hereunder in reliance on Rule 506 under the Securities Act, none of the Company, any of its predecessors, any affiliated issuer, any director, executive officer, other officer of the Company participating in the offering hereunder, any beneficial owner of 20% or more of the Company’s outstanding voting equity securities, calculated on the basis of voting power, nor any promoter (as that term is defined in Rule 405 under the Securities Act) connected with the Company in any capacity at the time of sale (each, an “**Issuer Covered Person**” and, together, “**Issuer Covered Persons**”) is subject to any of the “Bad Actor” disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act (a “**Disqualification Event**”), except for a Disqualification Event covered by Rule 506(d)(2) or (d)(3). The Company has exercised reasonable care to determine whether any Issuer Covered Person is subject to a Disqualification Event. The Company has complied, to the extent applicable, with its disclosure obligations under Rule 506(e), and has furnished to the Purchasers a copy of any disclosures provided thereunder.

3.2 Representations, Warranties and Covenants of the Purchasers. Each Purchaser severally (and not jointly) represents and warrants to, and agrees with, in each case as to itself only, the Company that:

(a) *No Public Sale or Distribution.* Such Purchaser is acquiring the Securities for its own account and not with a view towards, or for resale in connection with, the public sale or distribution thereof in a manner that would violate the Securities Act; provided, however, that by making the representations herein, such Purchaser does not agree to hold any of the Securities

for any minimum or other specific term and reserves the right to dispose of the Securities at any time in accordance with or pursuant to a registration statement or an exemption under the Securities Act. Such Purchaser is acquiring the Securities hereunder in the ordinary course of its business. Such Purchaser does not presently have any agreement or understanding, directly or indirectly, with any Person to distribute any of the Securities.

(b) *Purchaser Status.* Each of the Purchasers acknowledges that (i) (A) it is an institutional “accredited investor” as defined in Rule 501(a)(1), (2), (3) or (7) of Regulation D under the Securities Act and/or meets the definition of “qualified institutional buyer” as defined in Rule 144A(a)(1) under the Securities Act and (B) is not an entity formed for the sole purpose of acquiring the Securities or (ii) it is not purchasing the Securities as a result of any “directed selling efforts,” within the meaning of Rule 902(k) of Regulation S and that such Purchaser is not a “U.S. Person,” within the meaning of Rule 902(k) of Regulation S and it is purchasing the Securities pursuant to an offshore transaction, as such terms are used in Regulation S; (it being understood that the issuance of the Securities is being made in reliance on Section 4(2), Regulation D or Regulation S, and not Rule 144A), in either case which such knowledge and experience in financial and business matters as are necessary in order to evaluate the merits and risks of an investment in the Securities.

(c) *Reliance on Exemptions.* Such Purchaser understands that the Securities are being offered and sold to it in reliance on specific exemptions from the registration requirements of United States federal and state securities laws and that the Company is relying in part upon the truth and accuracy of, and such Purchaser’s compliance with, the representations, warranties, agreements, acknowledgments and understandings of such Purchaser set forth herein in order to determine the availability of such exemptions and the eligibility of such Purchaser to acquire the Securities.

(d) *No General Solicitation or Advertising.* Such Purchaser acknowledges that it is not purchasing the Securities as a result of any “general advertising” or, to its knowledge, “general solicitation” as such terms are used in Regulation D under the Securities Act.

(e) *Independent Evaluation.* Such Purchaser confirms and agrees that (i) it has independently evaluated the merits of its decision to purchase the Securities, (ii) it has not relied on the advice of, or any representations by, the Placement Agent or any Affiliate thereof or any representative of the Placement Agent or its Affiliates in making such decision, and (iii) neither the Placement Agent nor any of its representatives has any responsibility with respect to the completeness or accuracy of any information or materials furnished to such Purchaser in connection with the transactions contemplated hereby.

(f) *Information.* Such Purchaser acknowledges that the Company has offered the Purchaser and its advisors, if any, access to certain materials relating to the business, finances and operations of the Company or relating to the offer and sale of the Securities specifically requested by such Purchaser. Such Purchaser and its advisors, if any, have been afforded the opportunity to ask questions of the Company. Neither such inquiries nor any other due diligence investigations conducted by such Purchaser or its advisors, if any, or its representatives shall modify, amend or affect such Purchaser’s right to rely on the Company’s representations and warranties contained herein. Such Purchaser understands that its investment in the Securities

involves a high degree of risk and is able to bear the economic risk of such investment. Such Purchaser has sufficient knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment in the Securities and has sought such accounting, legal and tax advice as it has considered necessary to make an informed investment decision with respect to its acquisition of the Securities.

(g) *No Governmental Review.* Such Purchaser understands that no United States agency or any other government or governmental agency has passed on or made any recommendation or endorsement of the Securities or the fairness or suitability of the investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

(h) *Transfer or Resale.* Such Purchaser understands that: (i) the Securities have not been registered under the Securities Act or any U.S. state or non-U.S. securities laws; (ii) such Purchaser agrees that if it decides to offer, sell or otherwise transfer any of the Securities, such Securities may be offered, sold or otherwise transferred only: (A) pursuant to an effective registration statement under the Securities Act; (B) to the Company; (C) pursuant to offers and sales that occur in an “offshore transaction” within the meaning of Regulation S under the Securities Act and in compliance with local laws; or (D) within the United States (1) in accordance with the exemption from registration under the Securities Act provided by Rule 144A thereunder, if available, and in compliance with any applicable state securities laws, or (2) in a transaction that does not require registration under the Securities Act or applicable state securities laws.

(i) *Legend(s).* Such Purchaser understands that upon the original issuance thereof, and until such time as the same is no longer required under applicable requirements of the Securities Act or applicable state securities laws or is otherwise removed in accordance with Section 4.3(b) herein, the certificates or other instruments representing the Securities, and all certificates or other instruments issued in exchange therefor or in substitution thereof, shall bear the legend(s) set forth in **Section 4.3**, and that the Company will make a notation on its records and give instructions to any transfer agent of the Securities in order to implement the restrictions on transfer set forth and described herein.

(j) *Filings.* If required by applicable securities legislation, regulatory policy or order, or if required or requested by any securities commission, stock exchange or other regulatory authority, at the reasonable request of and at the sole expense of the Company, such Purchaser will use commercially reasonable efforts to execute, deliver and file and otherwise assist the Company in filing reports, questionnaires, undertakings and other documents with respect to the issue of the Securities.

(k) *Organization; Authority.* Such Purchaser is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization with the requisite power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents to which it is a party and otherwise to carry out its obligations hereunder and thereunder.

(l) *Validity; Enforcement.* Each of the Transaction Documents, to the extent such Purchaser is a signatory thereto, has been authorized by all necessary corporate action of, and duly and validly executed and delivered on behalf of, such Purchaser and constitute the legal, valid and binding obligations of such Purchaser enforceable against such Purchaser in accordance with their respective terms, except as such enforceability may be limited by general principles of equity or to applicable bankruptcy, insolvency, reorganization, moratorium, liquidation and other similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies.

(m) *No Conflicts.* The execution, delivery and performance by such Purchaser of each of the Transaction Documents, to the extent a signatory thereto, and the consummation by such Purchaser of the transactions contemplated thereby will not (i) result in a violation of the organizational documents of such Purchaser or (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any material agreement, indenture or instrument to which such Purchaser is a party, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws) applicable to such Purchaser, except in the case of clauses (ii) and (iii) above, for such conflicts, defaults, rights or violations which would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the ability of such Purchaser to perform its obligations hereunder.

(n) *Residency.* For purposes of U.S. securities laws, such Purchaser is a resident of that jurisdiction specified on **Exhibit A** hereto.

(o) *United States Federal Taxation.* Such Purchaser acknowledges that it has sought advice concerning the tax aspects of and tax considerations involved in acquiring and holding the Securities from an independent tax adviser that it has considered necessary to make an informed investment decision with respect to the U.S. federal income tax consequences, as well as with respect to the laws of any state, local or foreign jurisdiction that are applicable to such Purchaser, of owning and disposing of the Securities.

4. OTHER AGREEMENTS OF THE PARTIES

4.1 Integration. Except as contemplated by the terms of this Agreement, the Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities such that the rules of Nasdaq would require shareholder approval of the transactions contemplated hereby prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.

4.2 Securities Laws Disclosure; Publicity. The Company shall, by 9:00 A.M., New York City time, on the first (1st) Trading Day immediately following the date of this Agreement (the "**Disclosure Time**"), issue a press release announcing the transactions contemplated hereby and file with the Commission a Current Report on Form 8-K (such Current Report, the "**Disclosure Document**") disclosing all material terms of this Agreement and the Transaction Documents and the transactions contemplated hereby and thereby, the transaction and including as exhibits to the Disclosure Document, this Agreement and the other Transaction Documents (in each case, without redaction). Upon the issuance or filing of the Disclosure Document, no Purchaser, Purchaser's Affiliates, attorneys, agents and representatives shall be in possession of any material, non-public information received from the Company, any Subsidiary or any of their respective representatives, Affiliates, officers, directors, or employees or agents, and including, without limitation, the

Placement Agent, other than such Purchasers who have consented to the receipt of material, non-public information and agreed with the Company to keep such information confidential. Subject to the foregoing, neither the Company nor any Purchaser shall issue any press releases or any other public statements with respect to the transactions contemplated hereby except as may be reviewed and approved by the Company and the Placement Agent. The Company understands and confirms that the Purchaser and its Affiliates will rely on the foregoing representations in effecting transactions in securities of the Company. Notwithstanding anything in this Agreement to the contrary, the Company (i) shall not publicly disclose the name of Purchaser or any of its Affiliates or advisers, or include the name of Purchaser or any of its Affiliates or advisers in any press release, without the prior written consent of Purchaser and (ii) shall not publicly disclose the name of Purchaser or any of its Affiliates or advisers, or include the name of Purchaser or any of its Affiliates or advisers in any filing with the Commission or any regulatory agency or trading market, without the prior written consent of Purchaser, except (A) as required by the federal securities laws, rules or regulations and (B) to the extent such disclosure is required by other laws, rules or regulations, at the request of the staff of the Commission or regulatory agency or under the regulations of Nasdaq, in which case of clause (A) or (B), the Company shall provide Purchaser and the Placement Agent with prior written notice (including by e-mail) of such permitted disclosure, and shall reasonably consult with Purchaser and the Placement Agent regarding such disclosure.

4.3 Legend.

(a) Each Purchaser understands that the Shares, Pre-Funded Warrants and, once issued, the Warrant Shares shall bear a restrictive legend in substantially the following form (and a stop transfer order may be placed against transfer of the certificates for the Securities):

“THE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR IN ANY OTHER JURISDICTION. THE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] REPRESENTED HEREBY MAY NOT BE OFFERED, SOLD OR TRANSFERRED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER APPLICABLE SECURITIES LAWS UNLESS OFFERED, SOLD OR TRANSFERRED PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THOSE LAWS, INCLUDING RULE 144 UNDER THE SECURITIES ACT. NOTWITHSTANDING THE FOREGOING, THE SECURITIES [AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES] MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY THE SECURITIES; PROVIDED THAT IN CONNECTION WITH ANY FORECLOSURE OR TRANSFER OF THE SECURITIES, THE TRANSFEROR SHALL COMPLY WITH THE PROVISIONS HEREIN, IN THE SECURITIES PURCHASE AGREEMENT, AND UPON FORECLOSURE OR TRANSFER OF THE SECURITIES, SUCH FORECLOSING PERSON OR TRANSFEREE SHALL COMPLY WITH ALL PROVISIONS CONTAINED HEREIN, IN THE SECURITIES PURCHASE AGREEMENT.”

(b) A Purchaser may request that the Company remove, and the Company agrees to authorize the removal of, any legend from such Securities: (i) if there is an effective registration statement covering the resale of such Securities, (ii) if such Securities are sold or transferred pursuant to Rule 144 or an effective registration statement covering the resale of such Securities or (iii) if such Securities are eligible for sale under Rule 144(b)(1). If a legend removal request is made pursuant to the foregoing, the Company will, no later than two (2) Trading Days following the delivery by a Purchaser to the Company or the Company's transfer agent of a legended certificate representing such Securities (or a request for legend removal, in the case of Securities issued in book-entry form), deliver or cause to be delivered to such Purchaser a certificate representing such Securities that is free from all restrictive legends or an equivalent book-entry position, as requested by the Purchaser. Securities free from all restrictive legends shall be transmitted by the Company's transfer agent to a Purchaser by crediting the account of such Purchaser's prime broker with the Depository Trust Company ("**DTC**") through DTC's Deposit/Withdrawal at Custodian system, as directed by such Purchaser. The Company warrants that the Shares or Warrant Shares shall otherwise be freely transferable on the books and records of the Company as and to the extent provided in this Agreement. If a Purchaser effects a transfer of the Shares or Warrant Shares in accordance with **Section 4.3(b)**, the Company shall permit the transfer and shall promptly instruct its transfer agent to issue one or more certificates or credit Shares or Warrant Shares to the applicable balance accounts at DTC in such name and in such denominations as specified by such Purchaser to effect such transfer. Such Purchaser hereby agrees that the removal of the restrictive legend pursuant to this **Section 4.3(b)** is predicated upon the Company's reliance that such Purchaser will sell any such Securities pursuant to either the registration requirements of the Securities Act, or an exemption therefrom. Any fees (with respect to the Company's transfer agent, Company counsel or otherwise) associated with the issuance of any required opinion or the removal of such legend shall be borne by the Company.

4.4 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company covenants and agrees that neither it, nor any other Person acting on its behalf, including its representatives, Affiliates, officers, directors, employees or agents, including, without limitation, the Placement Agent, will provide any Purchaser or any of Purchaser's Affiliates, attorneys, agents or representatives with any information regarding the Company that constitutes, or that the Company reasonably believes constitutes, material non-public information regarding the Company or its Subsidiaries, unless prior thereto such Purchaser or any of Purchaser's Affiliates, attorneys, agents or representatives shall have previously consented in writing to the receipt of such information and agreed with the Company to keep such information confidential until such time as such information is publically disclosed or such time as set forth in such written agreement. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company. To the extent that the Company delivers any material, non-public information to a Purchaser without such Purchaser's consent, the Company hereby covenants and agrees that such Purchaser shall not have any duty of confidentiality to the Company or any of its officers, directors, agents, employees or Affiliates, or a duty to the Company or any of its officers, directors, agents, employees or Affiliates, not to trade

while aware of such material, non-public information. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or the Subsidiary, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

4.5 Reservation of Common Stock. As of the date hereof, the Company has reserved, and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue the Shares pursuant to this Agreement as well as the Warrant Shares upon exercise of any Pre-Funded Warrants.

4.6 Nasdaq Listing. Prior to the Closing, the Company shall prepare and file with Nasdaq an additional shares listing notification form covering all of the Shares and Warrant Shares and shall use its commercially reasonable efforts to take all steps necessary to cause all of the Shares and Warrant Shares to be listed on Nasdaq at all times after the Closing. The Company further agrees, if the Company applies to have the Common Stock traded on any other trading market, it will then include in such application all of the Shares and Warrant Shares, and will take such other action as is necessary to cause all of the Shares and Warrant Shares to be listed or quoted on such other trading market as promptly as possible. The Company will then take all action reasonably necessary to continue the listing and trading of its Common Stock on a trading market and will comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules of the trading market. The Company agrees to maintain the eligibility of the Common Stock for electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

4.7 Equal Treatment of Purchasers. No Purchaser has received terms in respect of its purchase of the Securities that are more favorable than those of any other Purchaser, other than (i) the terms particular to the regulatory requirements of such Purchaser or its Affiliates or related funds or (ii) terms concerning the publicity policies of such Purchaser.

4.8 Indemnification of Purchasers. Indemnification of Purchasers. Subject to the provisions of this **Section 4.8**, the Company will indemnify and hold each Purchaser and its directors, officers, stockholders, members, partners, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls such Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, stockholders, agents, members, partners or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a "**Purchaser Party**") harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations, warranties, covenants or agreements made by the Company

in this Agreement or in the other Transaction Documents or (b) any action instituted against a Purchaser in any capacity, or any of them or their respective Affiliates, by any stockholder of the Company who is not an Affiliate of such Purchaser, with respect to any of the transactions contemplated by the Transaction Documents (unless such action is based upon a breach of such Purchaser's representations, warranties or covenants under the Transaction Documents or any agreements or understandings such Purchaser may have with any such stockholder or any violations by the Purchaser of state or federal securities laws or any conduct by such Purchaser which constitutes fraud, gross negligence, willful misconduct, bad faith or malfeasance). Promptly after receipt by any Purchaser Party (the "**Indemnified Person**") of notice of any demand, claim or circumstances which could reasonably be expected to give rise to a claim or the commencement of any action, proceeding or investigation in respect of which indemnity may be sought pursuant to this **Section 4.8**, such Indemnified Person shall promptly notify the Company in writing and the Company shall assume the defense thereof, including the employment of counsel reasonably satisfactory to such Indemnified Person, and shall assume the payment of all fees and expenses; provided, however, that the failure of any Indemnified Person so to notify the Company shall not relieve the Company of its obligations hereunder except to the extent that the Company is actually and materially prejudiced by such failure to notify. In any such proceeding, any Indemnified Person shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless: (i) the Company and the Indemnified Person shall have mutually agreed to the retention of such counsel; (ii) the Company shall have failed promptly to assume the defense of such proceeding and to employ counsel reasonably satisfactory to such Indemnified Person in such proceeding; or (iii) in the reasonable judgment of counsel to such Indemnified Person, representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them; provided, however, that the Company shall not be responsible for the fees and expenses of more than one counsel for all Indemnified Persons. The Company shall not be liable for any settlement of any action, claim or proceeding effected without its prior written consent, which consent shall not be unreasonably withheld, delayed or conditioned. Without the prior written consent of the Indemnified Person, which consent shall not be unreasonably withheld, delayed or conditioned, the Company shall not effect any settlement of any pending or threatened proceeding in respect of which any Indemnified Person is or could have been a party and indemnity could have been sought hereunder by such Indemnified Party, unless such settlement includes an unconditional release of such Indemnified Person from all liability arising out of such proceeding and does not include any admission to fault, culpability or failure to act on the part of such Indemnified Person.

4.9 Rule 144. In order to enable the Purchasers to sell the Securities under Rule 144, the Company shall use its commercially reasonable efforts to make and keep public information available (as those terms are understood and defined in Rule 144) and shall timely file (without giving effect to any extensions of time that may be available therefor under Rule 12b-25 under the Securities Act or successor thereto) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act, so long as the Company remains subject to such requirements to enable Purchaser to resell the Securities pursuant to Rule 144. If the Company is not required to file reports pursuant to the Exchange Act, it will prepare and furnish to the Purchasers and make publicly available in accordance with Rule 144(c) such information as is required for the Purchasers to sell the Securities under Rule 144.

4.10 Irrevocable Transfer Agent Instructions. The Company shall issue irrevocable instructions to its transfer agent, and any subsequent transfer agent to issue to the Purchasers (or in such nominee's name(s) as designated by a Purchaser) book-entry notations representing the Shares set forth under "Shares of Common Stock to be Purchased" on Exhibit A hereto (the "**Irrevocable Transfer Agent Instructions**") and the Warrant Shares once such Pre-Funded Warrants are exercised. The Company represents and warrants that no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 4.10 (or instructions that are consistent therewith) will be given by the Company to its transfer agent in connection with this Agreement and that the Shares and the Warrant Shares shall otherwise be freely transferable on the books and records of the Company as and to the extent provided in this Agreement and the other Transaction Documents and applicable law. The Company acknowledges that a breach by it of its obligations under this Section 4.10 will cause irreparable harm to a Purchaser. Accordingly, the Company acknowledges that the remedy at law for a breach of its obligations under this Section 4.10 will be inadequate and agrees, in the event of a breach by the Company of the provisions of this Section 4.10, that a Purchaser shall be entitled, in addition to all other available remedies, to an order and/or injunction restraining any breach and requiring immediate issuance and transfer, without the necessity of showing economic loss and without any bond or other security being required.

4.11 Use of Proceeds. The Company shall use the net proceeds from the sale of the Securities hereunder for working capital purposes and shall not use such proceeds: (a) for the satisfaction of any portion of the Company's debt (other than payment of trade payables in the ordinary course of the Company's business and prior practices), (b) for the redemption of any Common Stock or Common Stock Equivalents, (c) for the settlement of any outstanding litigation or (d) in violation of FCPA or OFAC regulations.

4.12 Exercise Procedures. The form of Notice of Exercise included in the Pre-Funded Warrants set forth the totality of the procedures required of the Purchasers in order to exercise the Pre-Funded Warrants. No additional legal opinion, other information or instructions shall be required of the Purchasers to exercise their Pre-Funded Warrants. Without limiting the preceding sentences, no ink- original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required in order to exercise the Pre-Funded Warrants. The Company shall honor exercises of the Pre-Funded Warrants and shall deliver Warrant Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

5. MISCELLANEOUS

5.1 Termination. This Agreement may be terminated by any Purchaser, as to such Purchaser's obligations hereunder only and without any effect whatsoever on the obligations between the Company and the other Purchasers, by written notice to the other parties, if the Closing has not been consummated within ten (10) calendar days from the Effective Date through no fault of such Purchaser; provided, however, that no such termination will affect the right of any party to sue for any breach by the other party (or parties).

5.2 Fees and Expenses. Except as expressly set forth in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. Notwithstanding the foregoing, the Company shall pay all transfer agent fees, stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchasers.

5.3 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, contain the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, oral or written, with respect to such subject matter, which the parties acknowledge have been merged into such documents, exhibits and schedules.

5.4 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective upon actual receipt via mail, courier or confirmed email by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto.

5.5 Amendments; Waivers. No provision of this Agreement may be waived or amended except in a written instrument signed, in the case of an amendment, by (a) the Company and (b) (i) if prior to the Closing, all of the Purchasers, or (ii) following the Closing, Purchasers holding at least a majority of the Securities sold in the Closing and then-held by a Purchaser (in the case of each Pre-Funded Warrant, calculated based upon the number of Warrant Shares thereunder) or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought; provided, that if any amendment, disproportionately and adversely impacts a Purchaser (or group of Purchasers) in any material respect, the consent of such disproportionately impacted Purchaser (or group of Purchasers) shall also be required. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right. No consideration shall be offered or paid to any Purchaser to amend or consent to a waiver or modification of any provision of any Transaction Document unless the same consideration is also offered to all Purchasers who then hold Securities.

5.6 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

5.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their permitted successors and assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger or similar change of control transaction). Any Purchaser may assign its rights hereunder in whole or in part to any Affiliate and, with the prior written consent of the Company, to any Person, including upon an assignment or transfer of any Securities in compliance with the Transaction Documents and applicable law, provided such transferee shall agree in writing to be bound, with respect to the transferred Securities, by the terms and conditions of this the Transaction Documents that apply to the "Purchasers."

5.8 Third-Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto, and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other person, except as provided in **Section 5.9** hereto and the Indemnified Persons are intended third party beneficiaries of the provisions of Section 4.8.

5.9 Exculpation of the Placement Agent. Each party hereto agrees for the express benefit of each of the Placement Agent, its Affiliates and representatives that:

(a) Neither Jefferies LLC (the “**Placement Agent**”) nor any of its Affiliates or any of its representatives (1) has any duties or obligations other than those specifically set forth herein or in the engagement letter, dated as of August 3, 2022, among the Company and Jefferies LLC (the “**Engagement Letter**”); (2) shall be liable for any improper payment made in accordance with the information provided by the Company; (3) makes any representation or warranty, or has any responsibilities as to the validity, accuracy, value or genuineness of any information, certificates or documentation delivered by or on behalf of the Company pursuant to this Agreement or the Transaction Documents or in connection with any of the transactions contemplated hereby or thereby; or (4) shall be liable (x) for any action taken, suffered or omitted by any of them in good faith and reasonably believed to be authorized or within the discretion or rights or powers conferred upon it by this Agreement or any Transaction Document or (y) for anything which any of them may do or refrain from doing in connection with this Agreement or any Transaction Document, except for such party’s own gross negligence, willful misconduct or bad faith.

(b) The Placement Agent, its Affiliates and representatives shall be entitled to (1) rely on, and shall be protected in acting upon, any certificate, instrument, opinion, notice, letter or any other document or security delivered to any of them by or on behalf of the Company, and (2) be indemnified by the Company for acting as Placement Agent, respectively, hereunder pursuant the indemnification provisions set forth in the Engagement Letter.

5.10 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof to the extent such principals would result in the application in the laws of another jurisdiction. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the State of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the State of New York for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to

it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action or proceeding to enforce any provisions of the Transaction Documents, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

5.11 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

5.12 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

5.13 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights; provided, however, that in the case of a rescission of an exercise of a Pre-Funded Warrant, the applicable Purchaser shall be required to return any Warrant Shares subject to any such rescinded exercise notice concurrently with the return to such Purchaser of the aggregate exercise price paid to the Company for such shares and the restoration of such Purchaser's right to acquire such shares pursuant to such Purchaser's Pre-Funded Warrant (including, issuance of a replacement warrant certificate evidencing such restored right).

5.14 Replacement of Securities. If any certificate or instrument evidencing any Security is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction and customary and reasonable indemnity or bond, if requested. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Securities.

5.15 Remedies. Each of the Purchasers and the Company shall be entitled to exercise all rights provided herein or granted by law, including recovery of damages, for any breach of the Transaction Documents.

5.16 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights, including without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose.

5.17 Construction. The parties agree that each of them and/or their respective counsel has reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments hereto. Each Purchaser understands that the Placement Agent has acted solely as the agent of the Company in this placement of the Securities and such Purchaser has not relied on the business or legal advice of the Placement Agent or any of its agents, counsel or Affiliates in making its investment decision hereunder, and confirms that none of such persons has made any representations or warranties to such Purchaser in connection with the transactions contemplated hereby.

5.18 WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVES FOREVER TRIAL BY JURY.

5.19 Adjustments in Share Numbers and Prices. In the event of any stock split, subdivision, dividend or distribution to all stockholders of the Company payable in shares of Common Stock (or other securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly shares of Common Stock), combination or other similar recapitalization or event occurring after the date hereof and prior to the Closing, each reference in any Transaction Document to a number of shares or a price per share shall be deemed to be amended to appropriately account for such event.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

VIGIL NEUROSCIENCE, INC.

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

Address for Notice:

Vigil Neuroscience, Inc.
1 Broadway, 7th Floor
Suite 07-300
Cambridge, MA 02142
Attn: Christopher Verni, General Counsel

With a copy to (which shall not constitute notice):

Goodwin Procter LLP
100 Northern Avenue
Boston, Massachusetts, 02210
Attn: Kingsley Taft
Jacqueline Mercier
Gabriela Morales-Rivera

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

PURCHASERS:

[NAME OF PURCHASER]:

By: _____

Name: _____

Title: _____

Address: _____

EIN: _____

Contact: _____

Email: _____

Beneficial Ownership Limitation if purchasing Pre-Funded Warrants:

4.99% 9.99%

REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this “Agreement”) is made and entered into as of August 12, 2022, by and between Vigil Neuroscience, Inc., a Delaware corporation (the “Company”), and each of the several purchasers signatory hereto (each such purchaser, a “Purchaser” and, collectively, the “Purchasers”).

This Agreement is made pursuant to the Securities Purchase Agreement, dated as of the date hereof, between the Company and each Purchaser (the “Purchase Agreement”).

The Company and each Purchaser hereby agree as follows:

1. Definitions.

Capitalized terms used and not otherwise defined herein that are defined in the Purchase Agreement shall have the meanings given such terms in the Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

“Advice” shall have the meaning set forth in Section 6(d).

“Effectiveness Date” means, with respect to the Initial Registration Statement required to be filed hereunder, the 40th calendar day following the Filing Date (or, in the event of a “full review” by the Commission, the 75th calendar day following the Filing Date) and with respect to any additional Registration Statements which may be required pursuant to Section 2(c) or Section 3(c), the 45th calendar day following the date on which an additional Registration Statement is required to be filed hereunder (or, in the event of a “full review” by the Commission, the 75th calendar day following the date such additional Registration Statement is required to be filed hereunder); provided, however, that in the event the Company is notified by the Commission that one or more of the above Registration Statements will not be reviewed or is no longer subject to further review and comments, the Effectiveness Date as to such Registration Statement shall be the fifth Trading Day following the date on which the Company is so notified if such date precedes the dates otherwise required above, provided, further, if such Effectiveness Date falls on a day that is not a Trading Day, then the Effectiveness Date shall be the next succeeding Trading Day.

“Effectiveness Period” shall have the meaning set forth in Section 2(a).

“Event” shall have the meaning set forth in Section 2(d).

“Event Date” shall have the meaning set forth in Section 2(d).

“Filing Date” means, with respect to the Initial Registration Statement required hereunder, the 60th calendar day following the date hereof; provided, however, that if such day falls on a day that is not a Trading Day, then the Filing Date shall be the next succeeding Trading Day, and, with respect to any additional Registration Statements which may be required pursuant to Section 2(c) or Section 3(c), the earliest practical date on which the Company is permitted by SEC Guidance to file such additional Registration Statement related to the Registrable Securities.

“Holder” or “Holders” means the holder or holders, as the case may be, from time to time of Registrable Securities.

“Indemnified Party” shall have the meaning set forth in Section 5(c).

“Indemnifying Party” shall have the meaning set forth in Section 5(c).

“Initial Registration Statement” means the initial Registration Statement filed pursuant to this Agreement.

“Losses” shall have the meaning set forth in Section 5(a).

“Plan of Distribution” shall have the meaning set forth in Section 2(a).

“Prospectus” means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A promulgated by the Commission pursuant to the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by a Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

“Registrable Securities” means, as of any date of determination, (a) all Shares, (b) all Warrant Shares then issued and issuable upon exercise of the Pre-Funded Warrants (assuming on such date the Pre-Funded Warrants are exercised in full without regard to any exercise limitations therein) and (c) any securities issued or then issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the foregoing; provided, however, that any such Registrable Securities shall cease to be Registrable Securities (and the Company shall not be required to maintain the effectiveness of any, or file another, Registration Statement hereunder with respect thereto) for so long as (a) a Registration Statement with respect to the sale of such Registrable Securities is declared effective by the Commission under the Securities Act and such Registrable Securities have been disposed of by the Holder in accordance with such effective Registration Statement, (b) such Registrable Securities have been previously sold in accordance with Rule 144, or (c) such Registrable Securities become eligible for resale without volume or manner-of-sale restrictions and without current public information pursuant to Rule 144, as reasonably determined by the Company, upon the advice of counsel to the Company.

“Registration Statement” means any registration statement required to be filed hereunder pursuant to Section 2(a) and any additional registration statements contemplated by Section 2(c) or Section 3(c), including (in each case) the Prospectus, amendments and supplements to any such registration statement or Prospectus, including pre- and post-effective amendments, all exhibits thereto, and all material incorporated by reference or deemed to be incorporated by reference in any such registration statement.

“Rule 415” means Rule 415 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Selling Stockholder Questionnaire” shall have the meaning set forth in Section 3(a).

“SEC Guidance” means (i) any publicly-available written or oral guidance of the Commission staff, or any comments, requirements or requests of the Commission staff and (ii) the Securities Act.

“Trading Market” means any of the following markets or exchanges on which the shares of Common Stock are listed or quoted for trading on the date in question: the NYSE American, The Nasdaq Capital Market, The Nasdaq Global Market, The Nasdaq Global Select Market or the New York Stock Exchange, OTCQB or OTCQX, or the “Pink Open Market” of OTC Markets Group, Inc. (or any successors to any of the foregoing).

2. Shelf Registration.

(a) On or prior to each Filing Date, the Company shall prepare and file with the Commission a Registration Statement covering the resale of all of the Registrable Securities that are not then registered on an effective Registration Statement for an offering to be made on a continuous basis pursuant to Rule 415. Each Registration Statement filed hereunder shall be on Form S-3 (except if the Company is not then eligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form in accordance herewith, subject to the provisions of Section 2(e), including but not limited to a Registration Statement on Form S-1) and shall contain substantially the “Plan of Distribution” attached hereto as Annex A and substantially the “Selling Stockholder” section attached hereto as Annex B; provided, however, that no Holder shall be required to be named as an “underwriter” without such Holder’s express prior written consent. Subject to the terms of this Agreement, the Company shall use its commercially reasonable efforts to cause a Registration Statement filed under

this Agreement (including, without limitation, under Section 3(c)) to be declared effective under the Securities Act as promptly as possible after the filing thereof, but in any event no later than the applicable Effectiveness Date, and shall use its commercially reasonable efforts to keep such Registration Statement continuously effective under the Securities Act until the date that all Registrable Securities covered by such Registration Statement (i) have been sold, thereunder or pursuant to Rule 144, or (ii) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the Company to be in compliance with the current public information requirement under Rule 144 (the “Effectiveness Period”). The Company shall request in writing effectiveness of a Registration Statement as of 5:00 p.m. (New York City time) on a Trading Day. The Company shall promptly notify the Holders via facsimile or by e-mail of the effectiveness of a Registration Statement on the same Trading Day that the Company telephonically confirms effectiveness with the Commission, which shall be the date requested for effectiveness of such Registration Statement. The Company shall, by 10:00 p.m. (New York City time) on the Trading Day after the effective date of such Registration Statement, file a final Prospectus with the Commission as required by Rule 424. Failure to so notify the Holder within one (1) Trading Day of such notification of effectiveness or failure to file a final Prospectus as foreshall shall be deemed an Event under Section 2(d).

(b) Notwithstanding the registration obligations set forth in Section 2(a), if the Commission informs the Company that all of the Registrable Securities cannot, as a result of the application of Rule 415, be registered for resale as a secondary offering on a single Registration Statement, the Company agrees to promptly inform each of the Holders thereof and use its commercially reasonable efforts to file amendments to the Initial Registration Statement as required by the Commission, covering the maximum number of Registrable Securities permitted to be registered by the Commission, on Form S-3 or such other form available to register for resale the Registrable Securities as a secondary offering, including but not limited to a Form S-1; provided, however, that prior to filing such amendment, the Company shall be obligated to use diligent efforts to advocate with the Commission for the registration of all of the Registrable Securities in accordance with the SEC Guidance, including without limitation, Compliance and Disclosure Interpretation 612.09.

(c) Notwithstanding any other provision of this Agreement and subject to the payment of liquidated damages pursuant to Section 2(d), if the Commission or any SEC Guidance sets forth a limitation on the number of Registrable Securities permitted to be registered on a particular Registration Statement as a secondary offering (and notwithstanding that the Company used reasonably diligent efforts to advocate with the Commission for the registration of all or a greater portion of Registrable Securities), unless otherwise directed in writing by a Holder as to its Registrable Securities, the number of Registrable Securities to be registered on such Registration Statement will be reduced as follows:

a. First, the Company shall reduce or eliminate any securities to be included other than Registrable Securities; and

b. Second, the Company shall reduce Registrable Securities represented by Shares and the Pre-Funded Warrants (applied, in the case that some Shares and the Pre-Funded Warrants may be registered, to the Holders on a pro rata basis based on the total number of unregistered Shares and the Pre-Funded Warrants held by such Holders, except to the extent otherwise directed by the Commission).

In the event of a cutback hereunder, the Company shall give the Holder at least three (3) Trading Days prior written notice along with the calculations as to such Holder’s allotment. In the event the Company amends the Initial Registration Statement in accordance with the foregoing, the Company will use its reasonable best efforts to file with the Commission, as promptly as allowed by the Commission or SEC Guidance provided to the Company or to registrants of securities in general, one or more registration statements on Form S-3 or such other form available to register for resale those Registrable Securities that were not registered for resale on the Initial Registration Statement, as amended. Notwithstanding the foregoing, the Company shall not be obligated to pay liquidated damages pursuant to Section 2(d) with respect to any Registrable Securities cut back pursuant to this Section 2(c).

(d) If: (i) the Initial Registration Statement is not filed on or prior to its Filing Date, the Company shall be deemed to have not satisfied this clause (i), or (ii) the Company fails to file with the Commission a request for acceleration of a Registration Statement in accordance with Rule 461 promulgated by the Commission pursuant to the Securities Act, within five (5) Trading Days of the date that the Company is notified (orally or in writing, whichever is earlier) by the Commission that such Registration Statement will not be “reviewed” or will not be

subject to further review, or (iii) prior to the effective date of a Registration Statement, the Company fails to file any required pre-effective amendment or otherwise submit any required response in writing to comments made by the Commission in respect of such Registration Statement within fifteen (15) Trading Days after the receipt of comments by or notice from the Commission that such amendment is required in order for such Registration Statement to be declared effective or (iv) a Registration Statement registering for resale all of the Registrable Securities is not declared effective by the Commission by the Effectiveness Date of the Initial Registration Statement for a reason reasonably attributed to the action or inaction of the Company, or (v) after the effective date of a Registration Statement, such Registration Statement ceases for any reason reasonably attributed to the action or inaction of the Company to remain continuously effective as to all Registrable Securities included in such Registration Statement, or the Holders are otherwise not permitted to utilize the Prospectus therein to resell such Registrable Securities, for more than fifteen (15) consecutive calendar days or more than an aggregate of twenty (20) calendar days (which need not be consecutive calendar days) during any 12-month period (any such failure or breach being referred to as an “Event”, and for purposes of clauses (i) and (iv), the date on which such Event occurs, and for purpose of clause (ii) the date on which such five (5) Trading Day period is exceeded, and for purpose of clause (iii) the date which such fifteen (15) Trading Day period is exceeded, and for purpose of clause (v) the date on which such fifteen (15) or twenty (20) calendar day period, as applicable, is exceeded being referred to as an “Event Date”), then, in addition to any other rights the Holders may have hereunder or under applicable law, on each such Event Date and on each monthly anniversary of each such Event Date (if the applicable Event shall not have been cured by such date) until the applicable Event is cured, the Company shall pay to each Holder an amount in cash, as partial liquidated damages and not as a penalty, equal to the product of 1.0% multiplied by the Aggregate Purchase Price paid by such Holder pursuant to the Purchase Agreement. The parties agree that the maximum aggregate liquidated damages payable to a Holder under this Agreement shall be 5.0% of the Aggregate Purchase Price paid by such Holder pursuant to the Purchase Agreement for the Registrable Securities then held by such Holder.

(e) If Form S-3 is not available for the registration of the resale of Registrable Securities hereunder, the Company shall (i) register the resale of the Registrable Securities on another appropriate form and (ii) undertake to register the Registrable Securities on Form S-3 as soon as such form is available; provided that the Company shall maintain the effectiveness of the Registration Statement then in effect until such time as a Registration Statement on Form S-3 covering the Registrable Securities has been declared effective by the Commission. The Initial Registration Statement shall be filed on Form S-1, if Form S-3 is not available for the registration of the resale of Registrable Securities hereunder.

(f) Notwithstanding anything to the contrary contained herein, in no event shall the Company be permitted to name any Holder or affiliate of a Holder as an underwriter without the prior written consent of such Holder.

3. Registration Procedures.

In connection with the Company’s registration obligations hereunder, the Company shall:

(a) Not less than five (5) Trading Days prior to the filing of each Registration Statement and not less than one (1) Trading Day prior to the filing of any related Prospectus or any amendment or supplement thereto (including any document that would be incorporated or deemed to be incorporated therein by reference), the Company shall (i) furnish to each Holder copies of all such documents proposed to be filed, which documents (other than those incorporated or deemed to be incorporated by reference) will be subject to the review of such Holders, (ii) cause its officers and directors, counsel and independent registered public accountants to respond to any inquiries as shall be necessary, in the reasonable opinion of respective counsel to each Holder, to conduct a reasonable investigation within the meaning of the Securities Act and (iii) use its best efforts to reflect in each such document, when so filed with the Commission, such comments as each Holder reasonably proposed. Notwithstanding the above, the Company shall not be obligated to provide the Holders advance copies of any universal shelf registration statement registering securities in addition to those required hereunder, or any Prospectus prepared thereto. Each Holder agrees to furnish to the Company a completed questionnaire in the form attached to this Agreement as Annex C (a “Selling Stockholder Questionnaire”) on a date that is not later than the later of two (2) Trading Days prior to the Filing Date and the end of the fourth (4th) Trading Day following the date on which such Holder receives draft materials in accordance with this Section.

(b) (i) Prepare and file with the Commission such amendments, including post-effective amendments, to a Registration Statement and the Prospectus used in connection therewith as may be necessary to keep a Registration Statement continuously effective as to the applicable Registrable Securities for the Effectiveness Period and prepare and file with the Commission such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities, (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement (subject to the terms of this Agreement), and, as so supplemented or amended, to be filed pursuant to Rule 424, (iii) respond as promptly as reasonably possible to any comments received from the Commission with respect to a Registration Statement or any amendment thereto and provide as promptly as reasonably possible to the Holders true and complete copies of all correspondence from and to the Commission relating to a Registration Statement (provided that, the Company shall excise any information contained therein which would constitute material non-public information regarding the Company or any of its Subsidiaries), and (iv) comply in all material respects with the applicable provisions of the Securities Act and the Exchange Act with respect to the disposition of all Registrable Securities covered by a Registration Statement during the applicable period in accordance (subject to the terms of this Agreement) with the intended methods of disposition by the Holders thereof set forth in such Registration Statement as so amended or in such Prospectus as so supplemented.

(c) If during the Effectiveness Period, the number of Registrable Securities at any time exceeds 100% of the number of shares of Common Stock then registered in a Registration Statement, then the Company shall file as soon as reasonably practicable, but in any case prior to the applicable Filing Date, an additional Registration Statement covering the resale by the Holders of not less than the number of such Registrable Securities.

(d) Notify the Holders of Registrable Securities to be sold (which notice shall, pursuant to clauses (iii) through (vi) hereof, be accompanied by an instruction to suspend the use of the Prospectus until the requisite changes have been made) as promptly as reasonably possible (and, in the case of (i) (A) below, not less than one (1) Trading Day prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one (1) Trading Day following the day (i)(A) when a Prospectus or any Prospectus supplement or post-effective amendment to a Registration Statement is proposed to be filed, (B) when the Commission notifies the Company whether there will be a “review” of such Registration Statement and whenever the Commission comments in writing on such Registration Statement, and (C) with respect to a Registration Statement or any post-effective amendment, when the same has become effective, (ii) of any request by the Commission or any other federal or state governmental authority for amendments or supplements to a Registration Statement or Prospectus or for additional information, (iii) of the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of a Registration Statement covering any or all of the Registrable Securities or the initiation of any Actions for that purpose, (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose, (v) of the occurrence of any event or passage of time that makes the financial statements included in a Registration Statement ineligible for inclusion therein or any statement made in a Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to a Registration Statement, Prospectus or other documents so that, in the case of a Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, and (vi) of the occurrence or existence of any pending corporate development with respect to the Company that the Company believes may be material and that, in the determination of the Company, makes it not in the best interest of the Company to allow continued availability of a Registration Statement or Prospectus; provided, however, that in no event shall any such notice contain any information which would constitute material, non-public information regarding the Company or any of its Subsidiaries.

(e) Use its commercially reasonable efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order stopping or suspending the effectiveness of a Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(f) Furnish to each Holder, without charge, at least one conformed copy of each such Registration Statement and each amendment thereto, including financial statements and schedules, all documents incorporated or deemed to be incorporated therein by reference to the extent requested by such Person, and all exhibits to the extent requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the Commission, provided that any such item which is available on the EDGAR system (or successor thereto) need not be furnished in physical form.

(g) Subject to the terms of this Agreement, the Company hereby consents to the use of such Prospectus and each amendment or supplement thereto by each of the selling Holders in connection with the offering and sale of the Registrable Securities covered by such Prospectus and any amendment or supplement thereto, except after the giving of any notice pursuant to Section 3(d).

(h) Prior to any resale of Registrable Securities by a Holder, use its commercially reasonable efforts to register or qualify or cooperate with the selling Holders in connection with the registration or qualification (or exemption from registration or qualification) of such Registrable Securities for the resale by the Holder under the securities or Blue Sky laws of such jurisdictions within the United States as any Holder reasonably requests in writing, to keep each registration or qualification (or exemption therefrom) effective during the Effectiveness Period and to do any and all other acts or things reasonably necessary to enable the disposition in such jurisdictions of the Registrable Securities covered by each Registration Statement, provided that the Company shall not be required to qualify generally to do business in any jurisdiction where it is not then so qualified, subject the Company to any material tax in any such jurisdiction where it is not then so subject or file a general consent to service of process in any such jurisdiction.

(i) If requested by a Holder, cooperate with such Holder to facilitate the timely preparation and delivery of certificates or book-entry notations representing Registrable Securities to be delivered to a transferee pursuant to a Registration Statement, which certificates or book-entry notations shall be free, to the extent permitted by the Purchase Agreement, of all restrictive legends, and to enable such Registrable Securities to be in such denominations and registered in such names as any such Holder may request.

(j) Upon the occurrence of any event contemplated by Section 3(d), as promptly as reasonably possible under the circumstances taking into account the Company's good faith assessment of any adverse consequences to the Company and its stockholders of the premature disclosure of such event, prepare a supplement or amendment, including a post-effective amendment, to a Registration Statement or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, neither a Registration Statement nor such Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. If the Company notifies the Holders in accordance with clauses (iii) through (vi) of Section 3(d) above to suspend the use of any Prospectus until the requisite changes to such Prospectus have been made, then the Holders shall suspend use of such Prospectus. The Company will use its reasonable best efforts to ensure that the use of the Prospectus may be resumed as promptly as is practicable. The Company shall be entitled to exercise its right under this Section 3(j) to suspend the availability of a Registration Statement and Prospectus, subject to the payment of partial liquidated damages otherwise required pursuant to Section 2(d), for a period not to exceed 60 calendar days (which need not be consecutive days) in any 12-month period.

(k) Otherwise use commercially reasonable efforts to comply with all applicable rules and regulations of the Commission under the Securities Act and the Exchange Act, including, without limitation, Rule 172 under the Securities Act, file any final Prospectus, including any supplement or amendment thereof, with the Commission pursuant to Rule 424 under the Securities Act, promptly inform the Holders in writing if, at any time during the Effectiveness Period, the Company does not satisfy the conditions specified in Rule 172 and, as a result thereof, the Holders are required to deliver a Prospectus in connection with any disposition of Registrable Securities and take such other actions as may be reasonably necessary to facilitate the registration of the Registrable Securities hereunder.

(l) The Company shall use commercially reasonable efforts to maintain eligibility for use of Form S-3 (or any successor form thereto) for the registration of the resale of Registrable Securities.

(m) The Company may require each selling Holder to furnish to the Company a certified statement as to the number of shares of Common Stock beneficially owned by such Holder and, if required by the Commission, the natural persons thereof that have voting and dispositive control over the shares. During any periods that the

Company is unable to meet its obligations hereunder with respect to the registration of the Registrable Securities solely because any Holder fails to furnish such information within three Trading Days of the Company's request, any liquidated damages that are accruing at such time as to such Holder only shall be tolled and any Event that may otherwise occur solely because of such delay shall be suspended as to such Holder only, until such information is delivered to the Company.

4. Registration Expenses.

All fees and expenses incident to the performance of or compliance with, this Agreement by the Company shall be borne by the Company whether or not any Registrable Securities are sold pursuant to a Registration Statement. The fees and expenses referred to in the foregoing sentence shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses of the Company's counsel and independent registered public accountants) (A) with respect to filings made with the Commission, (B) with respect to filings required to be made with any Trading Market on which the Common Stock is then listed for trading, and (C) in compliance with applicable state securities or Blue Sky laws reasonably agreed to by the Company in writing (including, without limitation, fees and disbursements of counsel for the Company in connection with Blue Sky qualifications or exemptions of the Registrable Securities), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities and of printing prospectuses if the printing of prospectuses is reasonably requested by the Holders of a majority of the Registrable Securities included in the Registration Statement), (iii) messenger, telephone and delivery expenses, (iv) fees and disbursements of counsel for the Company, (v) Securities Act liability insurance, if the Company so desires such insurance, and (vi) fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder. In no event shall the Company be responsible for any broker or similar commissions of any Holder or, except to the extent provided for in the Transaction Documents, any legal fees or other costs of the Holders.

5. Indemnification.

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Holder, the officers, directors, members, partners, agents, brokers (and any other Persons with a functionally equivalent role of a Person holding such titles, notwithstanding a lack of such title or any other title) of each of them, each Person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, members, stockholders, partners, agents and employees (and any other Persons with a functionally equivalent role of a Person holding such titles, notwithstanding a lack of such title or any other title) of each such controlling Person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable attorneys' fees) and expenses (collectively, "Losses"), as incurred, arising out of or relating to (1) any untrue or alleged untrue statement of a material fact contained in a Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading or (2) any violation or alleged violation by the Company of the Securities Act, the Exchange Act or any state securities law, or any rule or regulation thereunder, in connection with the performance of its obligations under this Agreement, except to the extent, but only to the extent, that (i) such untrue statements or omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in a Registration Statement, such Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (ii) in the case of an occurrence of an event of the type specified in Section 3(d)(iii)-(vi), the use by such Holder of an outdated, defective or otherwise unavailable Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated, defective or otherwise unavailable for use by such Holder and prior to the receipt by such

Holder of the Advice contemplated in Section 6(d). The Company shall notify the Holders promptly of the institution, threat or assertion of any Proceeding arising from or in connection with the transactions contemplated by this Agreement of which the Company is aware. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such indemnified person and shall survive the transfer of any Registrable Securities by any of the Holders in accordance with Section 6(h).

(b) Indemnification by Holders. Each Holder shall, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees (and any other Persons with a functionally equivalent role of a Person holding such titles, notwithstanding a lack of such title or any other title), each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents or employees (and any other Persons with a functionally equivalent role of a Person holding such titles, notwithstanding a lack of such title or any other title) of such controlling Persons, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, to the extent arising out of or based solely upon any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus, or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading (i) to the extent, but only to the extent, that such untrue statement or omission is contained in any information so furnished in writing by such Holder to the Company expressly for inclusion in such Registration Statement or such Prospectus or (ii) to the extent, but only to the extent, that such information relates to such Holder's information provided in the Selling Stockholder Questionnaire or the proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in a Registration Statement (it being understood that the Holder has approved Annex A hereto for this purpose), such Prospectus or in any amendment or supplement thereto. In no event shall the liability of a selling Holder be greater in amount than the dollar amount of the proceeds (net of all expenses paid by such Holder in connection with any claim relating to this Section 5 and the amount of any damages such Holder has otherwise been required to pay by reason of such untrue statement or omission) received by such Holder upon the sale of the Registrable Securities included in the Registration Statement giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "Indemnified Party"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "Indemnifying Party") in writing, and the Indemnifying Party shall have the right to assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses incurred in connection with defense thereof, provided that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have materially and adversely prejudiced the Indemnifying Party.

An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless: (1) the Indemnifying Party has agreed in writing to pay such fees and expenses, (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding, or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and counsel to the Indemnified Party shall reasonably believe that a material conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and the reasonable fees and expenses of no more than one separate counsel (plus local counsel) shall be at the expense of the Indemnifying Party). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld or delayed. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding on terms reasonably satisfactory to such Indemnified Person and does not include any admission as to fault, culpability or failure to act on the part of such Indemnified Person.

Subject to the terms of this Agreement, all reasonable fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within ten Trading Days of written notice thereof to the Indemnifying Party, provided that the Indemnified Party shall promptly reimburse the Indemnifying Party for that portion of such fees and expenses applicable to such actions for which such Indemnified Party is finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) not to be entitled to indemnification hereunder. The failure to deliver written notice to the Indemnifying Party within a reasonable time of the commencement of any such action shall not relieve such Indemnifying Party of any liability to the Indemnified Party under this Section 5, except to the extent that the Indemnifying Party is materially and adversely prejudiced in its ability to defend such action.

(d) Contribution. If the indemnification under Section 5(a) or 5(b) is unavailable to an Indemnified Party or insufficient to hold an Indemnified Party harmless for any Losses, then each Indemnifying Party shall contribute to the amount paid or payable by such Indemnified Party, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in this Agreement, any reasonable attorneys' or other fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 5(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. In no event shall the contribution obligation of a Holder of Registrable Securities be greater in amount than the dollar amount of the proceeds (net of all expenses paid by such Holder in connection with any claim relating to this Section 5 and the amount of any damages such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission) received by it upon the sale of the Registrable Securities giving rise to such contribution obligation.

The indemnity and contribution agreements contained in this Section are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties and are not in diminution or limitation of the indemnification provisions under the Purchase Agreement.

6. Miscellaneous.

(a) Remedies. In the event of a breach by the Company or by a Holder of any of their respective obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, shall be entitled to specific performance of its rights under this Agreement. Each of the Company and each Holder agrees that monetary damages may not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agrees that, in the event of any action for specific performance in respect of such breach, it shall not assert or shall waive the defense that a remedy at law would be inadequate.

(b) No Piggyback on Registrations; Prohibition on Filing Other Registration Statements. Except as set forth on Schedule 6(b), neither the Company nor any of its security holders (other than the Holders in such capacity pursuant hereto) may include securities of the Company in any Registration Statements other than the Registrable Securities. Except as set forth on Schedule 6(b), the Company shall not file any other registration statements until all Registrable Securities are registered pursuant to a Registration Statement that is declared effective by the

Commission, provided that this Section 6(b) (i) shall not prohibit the Company from filing amendments to registration statements filed prior to the date of this Agreement, (ii) shall not prohibit the Company from filing a shelf registration statement on Form S-3 for a primary offering by the Company, provided that the Company makes no offering of securities pursuant to such shelf registration statement prior to the effective date of the Registration Statement required hereunder that includes all of the Registrable Securities, and (iii) shall not prohibit the Company from filing one or more of the registration statements on Form S-8 for the registration of the shares underlying its equity incentive plans.

(c) Compliance. Each Holder covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it (unless an exemption therefrom is available) in connection with sales of Registrable Securities pursuant to a Registration Statement.

(d) Discontinued Disposition. By its acquisition of Registrable Securities, each Holder agrees that, upon receipt of a notice from the Company of the occurrence of any event of the kind described in Section 3(d)(iii) through (vi), such Holder will forthwith discontinue disposition of such Registrable Securities under a Registration Statement until it is advised in writing (the "Advice") by the Company that the use of the applicable Prospectus (as it may have been supplemented or amended) may be resumed; provided, however, that neither the foregoing nor anything else contained herein shall be deemed to prohibit or require a Holder to discontinue the settlement of any sale of Registrable Securities with respect to which such Holder has entered into a contract for sale prior to such Holder's receipt of a notice from the Company of the happening of any event of the kind described in Section 3(d) (iii) through (vi). The Company will use its best efforts to ensure that the use of the Prospectus may be resumed as promptly as is practicable. The Company agrees and acknowledges that any periods during which the Holder is required to discontinue the disposition of the Registrable Securities hereunder shall be subject to the provisions of Section 2(d).

(e) Amendments and Waivers. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the same shall be in writing and signed by the Company and the Holders of 50.1% or more of the then outstanding Registrable Securities (for purposes of clarification, this includes any Registrable Securities issuable upon exercise or conversion of any Security); provided that, if any amendment, modification or waiver disproportionately and adversely impacts a Holder (or group of Holders), the consent of such disproportionately impacted Holder (or group of Holders) shall be required. If a Registration Statement does not register all of the Registrable Securities pursuant to a waiver or amendment done in compliance with the previous sentence, then the number of Registrable Securities to be registered for each Holder shall be reduced pro rata among all Holders and each Holder shall have the right to designate which of its Registrable Securities shall be omitted from such Registration Statement. Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of a Holder or some Holders and that does not directly or indirectly affect the rights of other Holders may be given only by such Holder or Holders of all of the Registrable Securities to which such waiver or consent relates; provided, however, that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the first sentence of this Section 6(e). No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of this Agreement unless the same consideration also is offered to all of the parties to this Agreement.

(f) Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be delivered as set forth in the Purchase Agreement.

(g) Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties and shall inure to the benefit of each Holder. The Company may not assign (except by merger) its rights or obligations hereunder without the prior written consent of all of the Holders of the then outstanding Registrable Securities. Each Holder may assign their respective rights hereunder in the manner and to the Persons as permitted under Section 5.7 of the Purchase Agreement.

(h) No Inconsistent Agreements. Neither the Company nor any of its Subsidiaries has entered, as of the date hereof, nor shall the Company or any of its Subsidiaries, on or after the date of this Agreement, enter into any agreement with respect to its securities, that would have the effect of impairing the rights granted to the Holders in this Agreement or otherwise conflicts with the provisions hereof. Except as set forth on Schedule 6(h), neither the Company nor any of its Subsidiaries has previously entered into any agreement granting any registration rights with respect to any of its securities to any Person that have not been satisfied in full.

(i) Execution and Counterparts. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or “.pdf” signature page were an original thereof.

(j) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be determined in accordance with the provisions of the Purchase Agreement.

(k) Cumulative Remedies. The remedies provided herein are cumulative and not exclusive of any other remedies provided by law.

(l) Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

(m) Headings. The headings in this Agreement are for convenience only, do not constitute a part of the Agreement and shall not be deemed to limit or affect any of the provisions hereof.

(n) Independent Nature of Holders’ Obligations and Rights. The obligations of each Holder hereunder are several and not joint with the obligations of any other Holder hereunder, and no Holder shall be responsible in any way for the performance of the obligations of any other Holder hereunder. Nothing contained herein or in any other agreement or document delivered at any closing, and no action taken by any Holder pursuant hereto or thereto, shall be deemed to constitute the Holders as a partnership, an association, a joint venture or any other kind of group or entity, or create a presumption that the Holders are in any way acting in concert or as a group or entity with respect to such obligations or the transactions contemplated by this Agreement or any other matters, and the Company acknowledges that the Holders are not acting in concert or as a group, and the Company shall not assert any such claim, with respect to such obligations or transactions. Each Holder shall be entitled to protect and enforce its rights, including without limitation the rights arising out of this Agreement, and it shall not be necessary for any other Holder to be joined as an additional party in any proceeding for such purpose. The use of a single agreement with respect to the obligations of the Company contained was solely in the control of the Company, not the action or decision of any Holder, and was done solely for the convenience of the Company and not because it was required or requested to do so by any Holder. It is expressly understood and agreed that each provision contained in this Agreement is between the Company and a Holder, solely, and not between the Company and the Holders collectively and not between and among Holders.

[Signature pages follow]

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

VIGIL NEUROSCIENCE, INC.

By: /s/ Ivana Magovčević-Liebisch

Name: Ivana Magovčević-Liebisch

Title: President and Chief Executive Officer

[Signature pages of Holders follows.]

[Signature page of Holder to VIGIL RRA]

Name of Holder: _____

Signature of Authorized Signatory of Holder: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

[*Signature pages continue.*]

Vigil Neuroscience Announces \$75 Million Private Placement Financing

CAMBRIDGE, Mass. – August 12, 2022 – Vigil Neuroscience, Inc. (Nasdaq: VIGL), a clinical-stage biotechnology company committed to harnessing the power of microglia for the treatment of neurodegenerative diseases, today announced that it has entered into a securities purchase agreement with certain existing and new accredited investors to issue and sell an aggregate of 7,293,084 shares of its common stock (“Common Stock”) at a price of \$7.30 per share and pre-funded warrants (“Pre-Funded Warrants”) to purchase up to an aggregate of 2,980,889 shares of common stock at a purchase price of \$7.2999 per pre-funded warrant, through a private investment in public equity (“PIPE”) financing. The Pre-Funded Warrants will have an exercise price of \$0.0001 per share of Common Stock, be immediately exercisable and remain exercisable until exercised in full. The prices of Common Stock and Pre-Funded Warrants do not include any discounts.

Vigil anticipates the gross proceeds from the PIPE to be approximately \$75.0 million, before deducting fees to the placement agent and other offering expenses payable by the Company. The closing of the financing is expected to occur on August 16, 2022, subject to customary closing conditions.

The PIPE was led by existing investor, Deep Track Capital LP, and included participation from new investors including BVF Partners and an investment fund affiliated with Deerfield Management Company, L.P., as well as existing investors including Invus and DAFNA Capital Management LLC.

“We thank our existing and new investors who have shown their support for and confidence in Vigil through this financing,” said Ivana Magovčević-Liebisch, Ph.D., J.D., President and Chief Executive Officer of Vigil. “With this funding, we are well positioned to execute on multiple anticipated value enhancing milestones that will allow us to continue to advance our pipeline of potentially transformative TREM2 agonist therapies for patients with both rare and common neurodegenerative diseases.”

Vigil expects to use the proceeds from the PIPE to fund the clinical development of its TREM2 agonist antibody and small molecule programs as well as working capital and other general corporate purposes. The proceeds from the private placement, combined with the current cash and cash equivalents, is expected to fund its operational plans into the first quarter of 2025.

Jefferies acted as exclusive placement agent in the private placement.

The securities sold in this PIPE, including the shares of common stock underlying the Pre-Funded Warrants, are being made in a transaction not involving a public offering and have not been registered under the Securities Act of 1933, as amended, and may not be offered or sold in the United States except pursuant to an effective registration statement or an applicable exemption from the registration requirements. Concurrently with the execution of the securities purchase agreement, Vigil and the investors entered into a registration rights agreement pursuant to which the Company has agreed to file a registration statement with the Securities and Exchange Commission registering the resale of the securities sold in the PIPE.

This press release shall not constitute an offer to sell or a solicitation of an offer to buy these securities, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction.

About Vigil Neuroscience

Vigil Neuroscience is a microglia-focused therapeutics company focused on developing treatments for both rare and common neurodegenerative diseases by restoring the vigilance of microglia, the sentinel immune cells of the brain. We are utilizing the tools of modern neuroscience drug development across multiple therapeutic modalities in our efforts to develop precision-based therapies to improve the lives of patients and their families.

Forward-Looking Statements

This press release contains forward-looking statements that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. The use of words such as “anticipate,” “believe,” “continue,” “could,” “endeavor,” “estimate,” “expect,” “anticipate,” “intend,” “may,” “might,” “plan,” “potential,” “predict,” “project,” “seek,” “should,” “target,” “will” or “would” or the negative of such words or other similar expressions can be used to identify forward-looking statements. Any forward-looking statements included in this press release, such as statements regarding the expected timing for the closing of the private placement and the anticipated use of proceeds from the private placement as well as expectation that such proceeds will fund Vigil’s operational plans into the first quarter of 2025, Vigil’s strategy, business plans and focus, the progress and timing of the preclinical and clinical development of Vigil’s programs, are based on management’s current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, uncertainties related to market conditions and the completion of the private placement on the anticipated terms, or at all. These and other risks and uncertainties are described in additional detail in the section entitled “Risk Factors” in Vigil’s Annual Report on Form 10-K filed on March 25, 2022, as updated by its Quarterly Reports on Form 10-Q and its other filings made with the SEC from time to time. Although Vigil’s forward-looking statements reflect the good faith judgment of its management, these statements are based only on facts and factors currently known by Vigil. As a result, you are cautioned not to rely on these forward-looking statements. Any forward-looking statement made in this press release speaks only as of the date on which it is made. Vigil undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future developments or otherwise.

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