

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): **June 1, 2023**

VolitionRx Limited

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of Incorporation)

001-36833
(Commission File Number)

91-1949078
(IRS Employer
Identification Number)

1489 West Warm Springs Road, Suite 110
Henderson, Nevada 89014
(Address of principal executive offices)

+1 (646) 650-1351
(Registrant's telephone number, including area code)

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	Trading Symbol(s)	Name of Each Exchange on which Registered
Common Stock	VNRX	NYSE American, LLC

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.

On June 1, 2023, VolitionRx Limited (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Prime Executions, Inc., doing business as Freedom Capital Markets (“Freedom”), as representative of the underwriters named therein (collectively, the “Underwriters”), pursuant to which the Company agreed to issue and sell an aggregate of 13,000,000 shares (the “Firm Shares”) of its common stock, par value \$0.001 per share (the “Common Stock”), to the Underwriters. The Firm Shares will be sold at a public offering price of \$1.27 per share, less an underwriting commission of 7.0%. Under the terms of the Underwriting Agreement, the Company also granted the Underwriters a 30-day option to purchase up to an additional 1,950,000 shares of Common Stock (the “Option Shares” and, together with the Firm Shares, the “Shares”) offered in the offering at the same price per share as the Firm Shares. The Company also agreed to reimburse the Underwriters for up to \$90,000 of their reasonable, necessary, and documented out-of-pocket expenses incurred in connection with the offering, including the fees and expenses of counsel to the Underwriters.

Net proceeds to the Company from the offering are expected to be approximately \$15.4 million before deducting estimated offering expenses payable by the Company. The Company intends to use the proceeds from the offering for research and continued product development, clinical studies, product commercialization, working capital and other general corporate purposes, including potential strategic acquisitions.

Pursuant to the Underwriting Agreement, the Company has also agreed to issue to Freedom warrants to purchase up to an aggregate 448,500 shares of common stock, or 3.0% of the number of Shares sold in the offering, assuming the overallotment option is exercised in full (the “Underwriter Warrants”), at an exercise price of \$2.00 per share. The Underwriter Warrants shall be exercisable following the six-month period commencing on the issuance date of the warrants and terminate five years following such issuance date. The Underwriter Warrants will contain provisions for demand and piggyback registration rights.

The offering is being made pursuant to the Company’s registration statement on Form S-3 (File No. 333-259783) previously filed with the Securities and Exchange Commission (“SEC”) on September 24, 2021, as amended on November 4, 2021 and declared effective by the SEC on November 8, 2021, as well as a prospectus supplement thereunder.

The offering of the Shares is expected to close on June 5, 2023 subject to customary closing conditions.

The Underwriting Agreement contains customary representations, warranties and covenants by the Company, customary conditions to closing, indemnification obligations of the Company and the Underwriters, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties, and covenants contained in the Underwriting Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement.

The Underwriting Agreement and form of Underwriter Warrant are filed as Exhibits 1.1 and 4.1, respectively, to this Current Report on Form 8-K (this “Current Report”). The foregoing descriptions of the terms of the Underwriting Agreement and Underwriter Warrant do not purport to be complete and are qualified in their entirety by reference to the exhibits, which are incorporated herein by reference. A copy of the opinion of Stradling Yocca Carlson & Rauth, P.C. relating to the legality of the issuance and sale of the Shares, Underwriter Warrants, and shares of common stock issuable upon exercise of the Underwriter Warrants in the offering is filed as Exhibit 5.1 to this Current Report.

Cautionary Note Regarding Forward-Looking Statements

This Current Report contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and other federal securities laws. Any statements contained herein that do not describe historical facts, including, but not limited to, statements regarding the expected completion of the offering, expected proceeds of the offering and the use of proceeds of the offering, and the issuance of the Underwriter Warrants in connection with the offering are forward-looking statements that involve risks and uncertainties that could cause actual results to differ materially from those discussed in such forward-looking statements. Such risks and uncertainties include, among others, the risks identified in the Company’s filings with the SEC, including its Quarterly Reports on Form 10-Q, Annual Reports on Form 10-K, and the prospectus supplement related to the offering. Any of these risks and uncertainties could materially and adversely affect the Company’s results of operations, which would, in turn, have a significant and adverse impact on the Company’s stock price. The Company cautions you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. The Company undertakes no obligation to update publicly any forward-looking statements to reflect new information, events or circumstances after the date they were made or to reflect the occurrence of unanticipated events.

Item 8.01 Other Events.

On May 31, 2023 and June 1, 2023, the Company issued a press release announcing the launch and pricing of the offering, respectively. Copies of the launch and pricing press releases are attached hereto as Exhibits 99.1 and 99.2, respectively, and incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
1.1*	Underwriting Agreement, dated June 1, 2023, by and between VolitionRx Limited and Prime Executions, Inc. dba Freedom Capital Markets.
4.1	Form of Underwriter Warrant.
5.1	Opinion of Stradling, Yocca, Carlson & Rauth, P.C.
23.1	Consent of Stradling, Yocca, Carlson & Rauth, P.C. (contained in Exhibit 5.1).
99.1	Launch Press Release dated May 31, 2023.
99.2	Pricing Press Release dated June 1, 2023.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

* Certain exhibits to the Underwriting Agreement have been omitted from this filing pursuant to Item 601(a)(5) of Regulation S-K. The Registrant will furnish copies of such exhibits to the Securities and Exchange Commission upon request by the Commission or its Staff.

SIGNATURE

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

VOLITIONRX LIMITED

Date: June 2, 2023

By: /s/ Cameron Reynolds
Cameron Reynolds
Chief Executive Officer & President

VOLITIONRX LIMITED
13,000,000 Shares of Common Stock
(par value \$0.001 per share)

Underwriting Agreement

June 1, 2023

Prime Executions, Inc. dba
Freedom Capital Markets.
As Representative of the several
Underwriters listed in
Schedule A hereto

c/o Prime Executions, Inc. dba
Freedom Capital Markets
40 Wall St, 58th Floor
New York, NY 10005

Ladies and Gentlemen:

VolitionRx Limited, a Delaware corporation (the “**Company**”), proposes to issue and sell to the several underwriters named in Schedule A (the “**Underwriters**”) an aggregate of 13,000,000 shares of its common stock, par value \$0.001 per share (the “**Shares**”). The 13,000,000 Shares to be sold by the Company are called the “**Firm Shares**.” In addition, the Company has granted to the Underwriters an option to purchase up to an additional 1,950,000 Shares (the “**Option Shares**”). The Firm Shares and, if and to the extent such option or any Underwriter Warrant (as defined below) is exercised, the Option Shares and Underwriter Warrant Shares (as defined below), are collectively called the “**Offered Shares**.” The Offered Shares and Underwriter Warrants are hereinafter referred to together as the “**Securities**.” Prime Executions, Inc. dba Freedom Capital Markets (“**Freedom**”) has agreed to act as representative of the several Underwriters (in such capacity, the “**Representative**”) in connection with the offering and sale of the Securities. To the extent there are no additional underwriters listed on Schedule A, the term “Representative” as used herein shall mean Freedom, as Underwriter, and the term “Underwriters” shall mean either the singular or the plural, as the context requires.

The Company has prepared and filed with the Securities and Exchange Commission (the “**Commission**”) a shelf registration statement on Form S-3, File No. 333-259783, as amended, including a base prospectus (the “**Base Prospectus**”) to be used in connection with the public offering and sale of the Securities. Such registration statement, as amended, including the financial statements, exhibits and schedules thereto, in the form in which it became effective under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Securities Act**”), including all documents incorporated or deemed to be incorporated by reference therein and any information deemed to be a part thereof at the time of effectiveness pursuant to Rule 430A or 430B under the Securities Act, is called the “**Registration Statement**.” Any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act in connection with the offer and sale of the Securities is called the “**Rule 462(b) Registration Statement**,” and from and after the date and time of filing of any such Rule 462(b) Registration Statement the term “Registration Statement” shall include the Rule 462(b) Registration Statement. The preliminary prospectus supplement dated May 31, 2023 describing the Securities and the offering thereof (the “**Preliminary Prospectus Supplement**”), together with the Base Prospectus, is called the “**Preliminary Prospectus**,” and the Preliminary Prospectus and any other prospectus supplement to the Base Prospectus in preliminary form that describes the Securities and the offering thereof and is used prior to the filing of the Prospectus (as defined below), together with the Base Prospectus, is called a “**preliminary prospectus**.” As used herein, the term “**Prospectus**” shall mean the final prospectus supplement to the Base Prospectus that describes the Securities and the offering thereof (the “**Final Prospectus Supplement**”), together with the Base Prospectus, in the form first used by the Underwriters to confirm sales of the Securities or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act.

As used herein, “**Applicable Time**” is 7:30 a.m., New York City time, on June 1, 2023. As used herein, “**free writing prospectus**” has the meaning set forth in Rule 405 under the Securities Act, and “**Time of Sale Prospectus**” means the Preliminary Prospectus, as amended or supplemented immediately prior to the Applicable Time, together with the free writing prospectuses, if any, identified on Schedule B hereto and the pricing information set forth on Schedule C hereto. As used herein, “**Road Show**” means a “road show” (as defined in Rule 433 under the Securities Act) relating to the offering of the Securities contemplated hereby that is a “written communication” (as defined in Rule 405 under the Securities Act).

All references in this underwriting agreement (the “**Agreement**”) to financial statements and schedules and other information which are “contained,” “included” or “stated” in, or “part of” the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Prospectus or the Prospectus, and all other references of like import, shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Prospectus or the Prospectus, as the case may be.

All references in this Agreement to amendments or supplements to the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Prospectus or the Prospectus shall be deemed to mean and include the filing of any document under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Exchange Act**”) that is or is deemed to be incorporated by reference in the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, or the Prospectus, as the case may be.

All references in this Agreement to (i) the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus or the Prospectus, any amendments or supplements to any of the foregoing, or any free writing prospectus, shall include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System (“**EDGAR**”) and (ii) the Prospectus shall be deemed to include any “electronic Prospectus” provided for use in connection with the offering of the Securities as contemplated by Section 3(o).

In the event that the Company has only one subsidiary, then all references herein to “subsidiaries” of the Company shall be deemed to refer to such single subsidiary, mutatis mutandis.

The Company hereby confirms its agreements with the Underwriters as follows:

1. Representations and Warranties of the Company. The Company represents and warrants to each Underwriter as of the date of this Agreement, the Applicable Time, the First Closing Date (as hereinafter defined) and each Option Closing Date (as hereinafter defined), if any, as follows:

(a) Compliance with Registration Requirements. The Registration Statement has become effective under the Securities Act. The Company has complied, to the Commission’s satisfaction, with all requests of the Commission for additional or supplemental information, if any. No stop order suspending the effectiveness of the Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the best knowledge of the Company, are contemplated or threatened by the Commission. At the time the Company’s Annual Report on Form 10-K for the year ended December 31, 2022 (the “**Annual Report**”) was filed with the Commission, or, if later, at the time the Registration Statement was originally filed with the Commission, the Company met the then-applicable requirements for use of Form S-3 under the Securities Act. The documents incorporated or deemed to be incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus, at the time they were or hereafter are filed with the Commission, or became effective under the Exchange Act, as the case may be, complied and will comply in all material respects with the requirements of the Exchange Act.

(b) Disclosure. Each preliminary prospectus and the Prospectus when filed complied in all material respects with the Securities Act and, if filed by electronic transmission pursuant to EDGAR, was identical (except as may be permitted by Regulation S-T under the Securities Act) to the copy thereof delivered to the Underwriters for use in connection with the offer and sale of the Securities. Each of the Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective and at all subsequent times, complied and will comply in all material respects with the Securities Act and did not and will not contain any 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 not misleading. As of the Applicable Time, the Time of Sale Prospectus did not, and at the time of each sale of the Securities and at the First Closing Date (as defined in Section 2), the Time of Sale Prospectus, as then amended or supplemented by the Company, if applicable, will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus, as of its date and (as then amended or supplemented) at all subsequent times, did not and will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement or any post-effective amendment thereto, or the Prospectus or the Time of Sale Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with written information relating to any Underwriter furnished to the Company in writing by the Representative expressly for use therein, it being understood and agreed that the only such information consists of the information described in Section 9(b). There are no contracts or other documents required to be described in the Time of Sale Prospectus or the Prospectus or to be filed as an exhibit to the Registration Statement which have not been described or filed as required.

(c) Free Writing Prospectuses; Road Show. As of the determination date referenced in Rule 164(h) under the Securities Act, the Company was not, is not or will not be (as applicable) an “ineligible issuer” in connection with the offering of the Securities pursuant to Rules 164, 405 and 433 under the Securities Act. Each free writing prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act, including timely filing with the Commission or retention where required and legending, and each such free writing prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Securities did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Prospectus or any preliminary prospectus and not superseded or modified. Except for the free writing prospectuses, if any, identified in Schedule B, and electronic road shows, if any, furnished to the Representative before first use, the Company has not prepared, used or referred to, and will not, without the Representative’s prior written consent, prepare, use or refer to, any free writing prospectus. Each Road Show, when considered together with the Time of Sale Prospectus, does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) RESERVED.

(e) Market Capitalization. At the time the Registration Statement was originally declared effective, and at the time the Company’s most recent Annual Report on Form 10-K was filed with the Commission, the Company met the then applicable requirements for the use of Form S-3 under the Securities Act. The aggregate market value of the outstanding voting and non-voting common equity (as defined in Securities Act Rule 405) of the Company held by persons other than affiliates of the Company (pursuant to Securities Act Rule 144, those that directly, or indirectly through one or more intermediaries, control, or are controlled by, or are under common control with, the Company) (the “**Non-Affiliate Shares**”), was equal to or greater than \$75 million (calculated by multiplying (x) the highest price at which the common equity of the Company closed on NYSE American, LLC within 60 days of the date of this Agreement times (y) the number of Non-Affiliate Shares). The Company is not a shell company (as defined in Rule 405 under the Securities Act) and has not been a shell company for at least 12 calendar months previously and if it has been a shell company at any time previously, has filed current Form 10 information (as defined in Instruction I.B.6 of Form S-3) with the Commission at least 12 calendar months previously reflecting its status as an entity that is not a shell company.

(f) RESERVED.

(g) RESERVED.

(h) Distribution of Offering Material By the Company. Prior to the later of (i) the expiration or termination of the option granted to the several Underwriters in Section 2, and (ii) the completion of the Underwriters' distribution of the Securities, the Company has not distributed and will not distribute any offering material in connection with the offering and sale of the Securities other than the Registration Statement, the Time of Sale Prospectus, the Prospectus or any free writing prospectus reviewed and consented to by the Representative, and the free writing prospectuses, if any, identified on Schedule B hereto.

(i) Financial Information. The consolidated financial statements of the Company included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus, if any, together with the related notes and schedules, present fairly, in all material respects, the consolidated financial position of the Company and the Subsidiaries (as defined below) as of the dates indicated and the consolidated results of operations, cash flows and changes in stockholders' equity of the Company for the periods specified and have been prepared in compliance with the requirements of the Securities Act and Exchange Act and in conformity with GAAP (as defined below) applied on a consistent basis during the periods involved, except as may be expressly stated in the related notes thereto; there are no financial statements (historical or pro forma) that are required to be included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus that are not included or incorporated by reference as required; the Company and the Subsidiaries (as defined below) do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations), not described in the Registration Statement (excluding the exhibits thereto), the Time of Sale Prospectus and the Prospectus; and all disclosures contained or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus and the Issuer Free Writing Prospectuses, if any, regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply in all material respects with Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Securities Act, to the extent applicable. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(j) Conformity with EDGAR Filing. The Preliminary Prospectus and Final Prospectus delivered to the Underwriter for use in connection with the sale of the Securities pursuant to this Agreement will be identical to the versions of the Preliminary Prospectus and Final Prospectus created to be transmitted to the Commission for filing via EDGAR, except to the extent permitted by Regulation S-T.

(k) Organization. The Company and each of its subsidiaries (as defined in Rule 405 under the Securities Act) (“**Subsidiaries**”) are duly organized, validly existing as a corporation and in good standing under the Laws of their respective jurisdictions of organization. The Company and each of its Subsidiaries are duly licensed or qualified as a foreign corporation for transaction of business and in good standing under the Laws of each other jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such license or qualification, and have all corporate power and authority necessary to own or hold their respective properties and to conduct their respective businesses as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, have a material adverse effect or would reasonably be expected to have a material adverse effect on or affecting the assets, business, operations, earnings, properties, condition (financial or otherwise), prospects, stockholders’ equity or results of operations of the Company and the Subsidiaries taken as a whole, or prevent or materially interfere with the consummation of the transactions contemplated hereby (a “**Material Adverse Effect**”).

(l) Subsidiaries. Except as set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company owns, directly or indirectly, all of the equity interests of the Subsidiaries free and clear of any lien, charge, security interest, encumbrance, right of first refusal or other restriction, and all the equity interests of the Subsidiaries are validly issued and are fully paid, nonassessable and free of preemptive and similar rights. No Subsidiary is currently prohibited, directly or indirectly, from paying any dividends to the Company, from making any other distribution on such Subsidiary’s capital stock, from repaying to the Company any loans or advances to such Subsidiary from the Company or from transferring any of such Subsidiary’s property or assets to the Company or any other Subsidiary of the Company.

(m) No Violation or Default. Neither the Company nor any of its Subsidiaries is (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 any of its Subsidiaries is a party or by which the Company or any of its Subsidiaries is bound or to which any of the property or assets of the Company or any of its Subsidiaries are subject; or (iii) in violation of any Law of any Governmental Authority, except, in the case of each of clauses (ii) and (iii) above, for any such violation or default that would not, individually or in the aggregate, have a Material Adverse Effect. To the Company’s knowledge, no other party under any material contract or other agreement to which it or any of its Subsidiaries is a party is in default in any respect thereunder where such default would have a Material Adverse Effect.

(n) No Material Adverse Effect. Subsequent to the respective dates as of which information is given in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Free Writing Prospectuses, if any (including any document deemed incorporated by reference therein), there has not been (i) any Material Adverse Effect or the occurrence of any development that the Company reasonably expects will result in a Material Adverse Effect, (ii) any transaction which is material to the Company and the Subsidiaries taken as a whole, (iii) any obligation or liability, direct or contingent (including any off-balance sheet obligations), incurred by the Company or any Subsidiary, which is material to the Company and the Subsidiaries taken as a whole, (iv) any material change in the capital stock or outstanding long-term indebtedness of the Company or any of its Subsidiaries or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company or any Subsidiary, other than in each case above in the ordinary course of business or as otherwise disclosed in the Registration Statement or Prospectus (including any document deemed incorporated by reference therein).

(o) Capitalization. The issued and outstanding shares of capital stock of the Company have been validly issued, are fully paid and nonassessable and, other than as disclosed in the Registration Statement, the Time of Sale Prospectus or the Prospectus, are not subject to any preemptive rights, rights of first refusal or similar rights. The Company has an authorized, issued and outstanding capitalization as set forth in the Registration Statement and the Prospectus as of the dates referred to therein (other than the grant of additional options under the Company's existing stock option plans, or changes in the number of outstanding shares of Common Stock of the Company due to the issuance of shares upon the exercise or conversion of securities exercisable for, or convertible into, Common Stock outstanding on the date hereof) and such authorized capital stock conforms in all material respects to the description thereof set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus. The description of the securities of the Company in the Registration Statement, the Time of Sale Prospectus and the Prospectus is complete and accurate in all material respects. Except as disclosed in or contemplated by the Registration Statement, the Time of Sale Prospectus or the Prospectus, as of the date referred to therein, the Company does not have outstanding any options to purchase, or any rights or warrants to subscribe for, or any securities or obligations convertible into, or exchangeable for, or any contracts or commitments to issue or sell, any shares of capital stock or other securities.

(p) Authorization; Enforceability. The Company has full legal right, power and authority to enter into this Agreement and perform the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Company and is a legal, valid and binding agreement of the Company enforceable in accordance with its terms, except as rights to indemnity or contribution hereunder may be limited by federal or state securities laws and except to the extent that enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar Laws affecting creditors' rights generally and by general equitable principles.

(q) Authorization of the Securities. The Offered Shares have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be duly and validly issued, fully paid and nonassessable, free and clear of any pledge, lien, encumbrance, security interest or other claim, including any statutory or contractual preemptive rights, resale rights, rights of first refusal or other similar rights, and will be registered pursuant to Section 12 of the Exchange Act. The Underwriter Warrants have been duly authorized for issuance and, when issued in accordance with their terms and the terms of this Agreement, will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except to the extent that (i) enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar Laws affecting creditors' rights generally and by general equitable principles and (ii) the indemnification provisions of certain agreements may be limited by federal or state securities Laws or public policy considerations in respect thereof. The Securities, when issued, will conform in all material respects to the description thereof set forth in or incorporated into the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(r) No Consents Required. No consent, approval, authorization, order, registration or qualification of or with any Governmental Authority is required for the execution, delivery and performance by the Company of this Agreement, the issuance and sale by the Company of the Securities, except for such consents, approvals, authorizations, orders and registrations or qualifications as may be required under applicable state securities Laws or Laws of the Financial Industry Regulatory Authority Inc. (“**FINRA**”) or NYSE American, LLC in connection with the sale of the Securities.

(s) No Preferential Rights. Except as set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus, (i) no person, as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act (each, a “**Person**”), has the right, contractual or otherwise, to cause the Company to issue or sell to such Person any Common Stock or shares of any other capital stock or other securities of the Company, (ii) no Person has any preemptive rights, resale rights, rights of first refusal, rights of co-sale, or any other rights (whether pursuant to a “poison pill” provision or otherwise) to purchase any Common Stock or shares of any other capital stock or other securities of the Company, (iii) other than the Underwriters, no Person has the right to act as an underwriter or as a financial advisor to the Company in connection with the offer and sale of the Common Stock, and (iv) no Person has the right, contractual or otherwise, to require the Company to register under the Securities Act any Common Stock or shares of any other capital stock or other securities of the Company, or to include any such shares or other securities in the Registration Statement or the offering contemplated thereby, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Securities as contemplated thereby or otherwise.

(t) Independent Public Accounting Firm. Sadler, Gibb & Associates LLC (the “**Accountant**”), whose report on the consolidated financial statements of the Company is filed with the Commission as part of the Company’s most recent Annual Report on Form 10-K filed with the Commission and incorporated by reference into the Registration Statement and the Prospectus, are and, during the periods covered by their report, were an independent registered public accounting firm within the meaning of the Securities Act and the Public Company Accounting Oversight Board (United States). To the Company’s knowledge, the Accountant is not in violation of the auditor independence requirements of the Sarbanes-Oxley Act of 2002 (the “**Sarbanes-Oxley Act**”) with respect to the Company.

(u) Enforceability of Agreements. All agreements between the Company and third parties expressly referenced in the Prospectus are legal, valid and binding obligations of the Company enforceable in accordance with their respective terms, except to the extent that (i) enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar Laws affecting creditors’ rights generally and by general equitable principles and (ii) the indemnification provisions of certain agreements may be limited by federal or state securities Laws or public policy considerations in respect thereof.

(v) No Litigation. Except as set forth in the Registration Statement, the Time of Sale Prospectus or the Prospectus, there are no actions, suits or proceedings by or before any Governmental Authority pending, nor, to the Company's knowledge, any audits or investigations by or before any Governmental Authority, to which the Company or a Subsidiary is a party or to which any property of the Company or any of its Subsidiaries is the subject that, individually or in the aggregate, would have a Material Adverse Effect and, to the Company's knowledge, no such actions, suits, proceedings, audits or investigations are threatened or contemplated by any Governmental Authority or threatened by others; and (i) there are no current or pending audits, investigations, actions, suits or proceedings by or before any Governmental Authority that are required under the Securities Act to be described in the Time of Sale Prospectus or Prospectus that are not so described; and (ii) there are no contracts or other documents that are required under the Securities Act to be filed as exhibits to the Registration Statement that are not so filed.

(w) RESERVED.

(x) Consents and Permits. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company and its Subsidiaries have made all filings, applications and submissions required by, possesses and is operating in compliance with, all approvals, licenses, certificates, certifications, clearances, consents, grants, exemptions, marks, notifications, orders, permits and other authorizations issued by, the appropriate federal, state or foreign Governmental Authority (including the United States Food and Drug Administration (the "FDA"), the United States Drug Enforcement Administration or any other foreign, federal, state, provincial or local Government Authorities engaged in the regulation of clinical trials, pharmaceuticals, biologics or biohazardous substances or materials) necessary for the ownership or lease of their respective properties or to conduct its businesses as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus (collectively, "**Permits**"), except for such Permits the failure of which to possess, obtain or make the same would not have a Material Adverse Effect; the Company and its Subsidiaries are in compliance with the terms and conditions of all such Permits, except where the failure to be in compliance would not have a Material Adverse Effect; all of the Permits are valid and in full force and effect, except where any invalidity, individually or in the aggregate, would not be reasonably expected to have a Material Adverse Effect; and neither the Company nor any of its Subsidiaries has received any written notice relating to the limitation, revocation, cancellation, suspension, modification or non-renewal of any such Permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect, or has any reason to believe that any such license, certificate, permit or authorization will not be renewed in the ordinary course. To the extent required by applicable Laws of the FDA, the Company or the applicable Subsidiary has submitted to the FDA an Investigational New Drug Application or amendment or supplement thereto for each clinical trial it has conducted or sponsored or is conducting or sponsoring; all such submissions were in material compliance with applicable Laws when submitted and no material deficiencies have been asserted by the FDA with respect to any such submissions. The Company and each Subsidiary possess such valid and current certificates, authorizations or permits issued by the appropriate state, federal or foreign regulatory agencies or bodies necessary to conduct their respective businesses, except where the failure to have such a certificate, authorization or permit would not result in a Material Adverse Effect, and neither the Company nor any Subsidiary has received, or has any reason to believe that it will receive, any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, could result in a Material Adverse Effect.

(y) Regulatory Filings. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, neither the Company nor any of its Subsidiaries has failed to file with the applicable Governmental Authority (including the FDA, or any foreign, federal, state, provincial or local Governmental Authority performing functions similar to those performed by the FDA) any required filing, declaration, listing, registration, report or submission, except for such failures that, individually or in the aggregate, would not have a Material Adverse Effect; except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, all such filings, declarations, listings, registrations, reports or submissions were in compliance with applicable Laws when filed and no deficiencies have been asserted by any applicable regulatory authority with respect to any such filings, declarations, listings, registrations, reports or submissions, except for any deficiencies that, individually or in the aggregate, would not have a Material Adverse Effect. The Company has operated and currently is, in all material respects, in compliance with the United States Federal Food, Drug, and Cosmetic Act, all applicable rules and regulations of the FDA and other federal, state, local and foreign Governmental Authority exercising comparable authority.

(z) Intellectual Property. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company and its Subsidiaries own, possess, license or have other rights to use all foreign and domestic patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, Internet domain names, know-how and other intellectual property (collectively, the “**Intellectual Property**”), necessary for the conduct of their respective businesses as now conducted except to the extent that the failure to own, possess, license or otherwise hold adequate rights to use such Intellectual Property would not, individually or in the aggregate, have a Material Adverse Effect. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus (i) there are no rights of third parties to any such Intellectual Property owned by the Company and its Subsidiaries; (ii) to the Company’s knowledge, there is no infringement by third parties of any such Intellectual Property; (iii) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the Company’s and its Subsidiaries’ rights in or to any such Intellectual Property, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim; (iv) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property; (v) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others that the Company and its Subsidiaries infringe or otherwise violate any patent, trademark, copyright, trade secret or other proprietary rights of others; (vi) to the Company’s knowledge, there is no third-party U.S. patent or published U.S. patent application which contains claims for which an Interference Proceeding (as defined in 35 U.S.C. § 135) has been commenced against any patent or patent application described in the Registration Statement, the Time of Sale Prospectus and the Prospectus as being owned by or licensed to the Company; and (vii) the Company and its Subsidiaries have complied, in all material respects, with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or such Subsidiary, and all such agreements are in full force and effect, except, in the case of any of clauses (i)-(vii) above, for any such infringement by third parties or any such pending or threatened suit, action, proceeding or claim as would not, individually or in the aggregate, result in a Material Adverse Effect.

(aa) Clinical Studies. The preclinical studies and tests and clinical trials described in the Registration Statement, the Time of Sale Prospectus and the Prospectus were, and, if still pending, are being conducted in all material respects in accordance with the experimental protocols, procedures and controls pursuant to, where applicable, accepted professional and scientific standards for products or product candidates comparable to those being developed by the Company; the descriptions of such studies, tests and trials, and the results thereof, contained in the Registration Statement, the Time of Sale Prospectus and the Prospectus are accurate and complete in all material respects; the Company has no knowledge of any tests, studies or trials not described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the results of which reasonably call into question in any material respect the results of the tests, studies and trials described in the Registration Statement, the Time of Sale Prospectus and the Prospectus; and the Company has not received any written notice or correspondence from the FDA or any foreign, state or local Governmental Authority exercising comparable authority or any institutional review board or comparable authority requiring the termination, suspension, clinical hold or material modification of any tests, studies or trials.

(bb) No Material Defaults. Neither the Company nor any of the Subsidiaries has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, would have a Material Adverse Effect. The Company has not filed a report pursuant to Section 13(a) or 15(d) of the Exchange Act since the filing of its last Annual Report on Form 10-K, indicating that it (i) has failed to pay any dividend or sinking fund installment on preferred stock or (ii) has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, would have a Material Adverse Effect.

(cc) Certain Market Activities. Neither the Company nor any of its subsidiaries has taken, directly or indirectly, any action designed to or would reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares or of any “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“**Regulation M**”)) with respect to the Shares, whether to facilitate the sale or resale of the Securities or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(dd) Broker/Dealer Relationships. Neither the Company nor any of the Subsidiaries (i) is required to register as a “broker” or “dealer” in accordance with the provisions of the Exchange Act or (ii) directly or indirectly through one or more intermediaries, controls or is a “person associated with a member” or “associated person of a member” (within the meaning set forth in the FINRA Manual).

(ee) No Reliance. The Company has not relied upon the Underwriter or legal counsel for the Underwriter for any legal, tax or accounting advice in connection with the offering and sale of the Securities.

(ff) Taxes. The Company and each of its Subsidiaries have filed all federal, state, local and foreign tax returns which have been required to be filed and paid all taxes shown thereon through the date hereof, to the extent that such taxes have become due and are not being contested in good faith, except where the failure to so file or pay would not have a Material Adverse Effect. Except as otherwise disclosed in or contemplated by the Registration Statement, the Time of Sale Prospectus or the Prospectus, no tax deficiency has been determined adversely to the Company or any of its Subsidiaries which has had, or would have, individually or in the aggregate, a Material Adverse Effect. The Company has no knowledge of any federal, state or other governmental tax deficiency, penalty or assessment which has been or might be asserted or threatened against it which would have a Material Adverse Effect.

(gg) Title to Real and Personal Property. Except as set forth in the Registration Statement, the Time of Sale Prospectus or the Prospectus, the Company and its Subsidiaries have good and marketable title in fee simple to all items of real property owned by them, good and valid title to all personal property described in the Registration Statement, the Time of Sale Prospectus or the Prospectus as being owned by them that are material to the businesses of the Company or such Subsidiary, in each case free and clear of all liens, encumbrances and claims, except those matters that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and any of its Subsidiaries or (ii) would not, individually or in the aggregate, have a Material Adverse Effect. Any real or personal property described in the Registration Statement, the Time of Sale Prospectus or the Prospectus as being leased by the Company and any of its Subsidiaries is held by them under valid, existing and enforceable leases, except those that (A) do not materially interfere with the use made or proposed to be made of such property by the Company or any of its Subsidiaries or (B) would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect. Each of the properties of the Company and its Subsidiaries complies with all applicable Laws (including building and zoning Laws and Laws relating to access to such properties), except if and to the extent disclosed in the Registration Statement, the Time of Sale Prospectus or the Prospectus or except for such failures to comply that would not, individually or in the aggregate, reasonably be expected to interfere in any material respect with the use made and proposed to be made of such property by the Company and its Subsidiaries or otherwise have a Material Adverse Effect. None of the Company or its subsidiaries has received from any Governmental Authorities any notice of any condemnation of, or zoning change affecting, the properties of the Company and its Subsidiaries, and the Company knows of no such condemnation or zoning change which is threatened, except for such that would not reasonably be expected to interfere in any material respect with the use made and proposed to be made of such property by the Company and its Subsidiaries or otherwise have a Material Adverse Effect, individually or in the aggregate.

(hh) Environmental Laws. Except as set forth in the Registration Statement, the Time of Sale Prospectus or the Prospectus, the Company and its Subsidiaries (i) are in compliance with any and all applicable federal, state, local and foreign Laws relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (collectively, “**Environmental Laws**”); (ii) have received and are in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses as described in the Registration Statement, the Time of Sale Prospectus or the Prospectus; and (iii) have not received written notice of any actual or potential liability for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except, in the case of any of clauses (i), (ii) or (iii) above, for any such failure to comply or failure to receive required permits, licenses, other approvals or liability as would not, individually or in the aggregate, have a Material Adverse Effect.

(ii) RESERVED.

(jj) Disclosure Controls. Except as set forth in the Registration Statement, Time of Sale Prospectus or Prospectus, the Company and each of its Subsidiaries maintain systems of 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 generally accepted accounting principles and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (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. Except as set forth in the Registration Statement, Time of Sale Prospectus or Prospectus, the Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting (other than as set forth in the Registration Statement, Time of Sale Prospectus or Prospectus). Except as set forth in the Registration Statement, Time of Sale Prospectus or prospectus, since the date of the latest audited financial statements of the Company included in the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting (other than as set forth in the Registration Statement, Time of Sale Prospectus or Prospectus). The Company has established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 and 15d-15) for the Company and designed such disclosure controls and procedures to ensure that material information relating to the Company and each of its Subsidiaries is made known to the certifying officers by others within those entities, particularly during the period in which the Company's Annual Report on Form 10-K or Quarterly Report on Form 10-Q, as the case may be, is being prepared. The Company's certifying officers have evaluated the effectiveness of the Company's disclosure controls and procedures as of a date within 90 days prior to the filing date of the Form 10-K for the fiscal year most recently ended (such date, the "**Evaluation Date**"). The Company presented in its Form 10-K for the fiscal year most recently ended the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date and the disclosure controls and procedures are effective. Since the Evaluation Date, there have been no significant changes in the Company's internal controls (as such term is defined in Item 307(b) of Regulation S-K under the Securities Act) or, to the Company's knowledge, in other factors that could significantly affect the Company's internal controls.

(kk) Sarbanes-Oxley. There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any applicable provisions of the Sarbanes-Oxley Act and the rules and regulations promulgated thereunder. Each of the principal executive officer and the principal financial officer of the Company (or each former principal executive officer of the Company and each former principal financial officer of the Company as applicable) has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act with respect to all reports, schedules, forms, statements and other documents required to be filed by it or furnished by it to the Commission. For purposes of the preceding sentence, "principal executive officer" and "principal financial officer" shall have the meanings given to such terms in the Sarbanes-Oxley Act.

(ll) Brokers. Neither the Company nor any of the Subsidiaries has incurred any liability for any finder's fees, brokerage commissions or similar payments in connection with the transactions herein contemplated, except as may otherwise exist with respect to or pursuant to this Agreement.

(mm) Labor Disputes. No labor disturbance by or dispute with employees of the Company or any of its Subsidiaries exists or, to the knowledge of the Company, is threatened which would result in a Material Adverse Effect.

(nn) Investment Company Act. Neither the Company nor any of the Subsidiaries is, or will be, either after receipt of payment for the Securities or after the application of the proceeds therefrom as described under "Use of Proceeds" in the Registration Statement, the Time of Sale Prospectus or the Prospectus, required to register as an "investment company" or an entity "controlled" by an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended (the "**Investment Company Act**").

(oo) Operations. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance, in all material respects, with applicable financial record keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, the money laundering Laws of all jurisdictions to which the Company or its Subsidiaries are subject, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Authority (collectively, the "**Money Laundering Laws**"); and no action, suit or proceeding by or before any Governmental Authority involving the Company or any of its Subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(pp) Off-Balance Sheet Arrangements. There are no transactions, arrangements and other relationships between and/or among the Company, and/or, to the Company's knowledge, any of its affiliates and any unconsolidated entity, including any structural finance, special purpose or limited purpose entity (each, an "**Off-Balance Sheet Transaction**") that could reasonably be expected to affect materially the Company's liquidity or the availability of or requirements for its capital resources, including those Off-Balance Sheet Transactions described in the Commission's Statement about Management's Discussion and Analysis of Financial Conditions and Results of Operations (Release Nos. 33-8056; 34-45321; FR-61), required to be described in the Prospectus which have not been described as required.

(qq) ERISA. To the knowledge of the Company, each material employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974 (“**ERISA**”), that is maintained, administered or contributed to by the Company or any of its affiliates for employees or former employees of the Company and any of its Subsidiaries has been maintained in material compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including ERISA and the Internal Revenue Code of 1986 (the “**Code**”); no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred which would result in a material liability to the Company with respect to any such plan excluding transactions effected pursuant to a statutory or administrative exemption; and for each such plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no “accumulated funding deficiency” as defined in Section 412 of the Code has been incurred, whether or not waived, and the fair market value of the assets of each such plan (excluding for these purposes accrued but unpaid contributions) exceeds the present value of all benefits accrued under such plan determined using reasonable actuarial assumptions.

(rr) Forward-Looking Statements. Each financial or operational projection or other “forward-looking statement” (as defined by Section 27A of the Securities Act or Section 21E of the Exchange Act) contained in the Registration Statement, the Time of Sale Prospectus or the Prospectus (i) was so included by the Company in good faith and with reasonable basis after due consideration by the Company of the underlying assumptions, estimates and other applicable facts and circumstances and (ii) is accompanied by meaningful cautionary statements identifying those factors that could cause actual results to differ materially from those in such forward-looking statement.

(ss) Margin Rules. Neither the issuance, sale and delivery of the Securities nor the application of the proceeds thereof by the Company as described in the Registration Statement and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

(tt) Insurance. The Company and each of its Subsidiaries carry, or are covered by, insurance in such amounts and covering such risks as the Company and each of its Subsidiaries reasonably believe are adequate for the conduct of their properties and as is customary for companies engaged in similar businesses in similar industries.

(uu) No Improper Practices. (i) Neither the Company nor the Subsidiaries, nor, to the Company's knowledge, any director, officer, or employee of the Company or any Subsidiary nor, to the Company's knowledge, any agent, affiliate or other person acting on behalf of the Company or any Subsidiary has, in the past five years, made any unlawful contributions to any candidate for any political office (or failed fully to disclose any contribution in violation of applicable Law) or made any contribution or other payment to any official of, or candidate for, any federal, state, municipal, or foreign office or other person charged with similar public or quasi-public duty in violation of any applicable Law or of the character required to be disclosed in the Prospectus; (ii) no relationship, direct or indirect, exists between or among the Company or any Subsidiary or, to the Company's knowledge, any affiliate of any of them, on the one hand, and the directors, officers and stockholders of the Company or any Subsidiary, on the other hand, that is required by the Securities Act to be described in the Registration Statement, the Time of Sale Prospectus and the Prospectus that is not so described; (iii) no relationship, direct or indirect, exists between or among the Company or any Subsidiary or, to the Company's knowledge, any affiliate of them, on the one hand, and the directors, officers, or stockholders of the Company or any Subsidiary, on the other hand, that is required by the rules of FINRA to be described in the Registration Statement, the Time of Sale Prospectus and the Prospectus that is not so described; (iv) except as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, there are no material outstanding loans or advances or material guarantees of indebtedness by the Company or any Subsidiary to or, to the Company's knowledge, for the benefit of any of their respective officers or directors or any of the members of the families of any of them; and (v) the Company has not offered, or caused any placement agent to offer, Common Stock to any person with the intent to influence unlawfully (A) a customer or supplier of the Company or any Subsidiary to alter the customer's or supplier's level or type of business with the Company or any Subsidiary or (B) a trade journalist or publication to write or publish favorable information about the Company or any Subsidiary or any of their respective products or services, and, (vi) neither the Company nor any Subsidiary nor any director, officer or employee of the Company or any Subsidiary nor, to the Company's knowledge, any agent, affiliate or other person acting on behalf of the Company or any Subsidiary has (A) violated or is in violation of any applicable provision of the U.S. Foreign Corrupt Practices Act of 1977, or any other applicable anti-bribery or anti-corruption Law (collectively, "**Anti-Corruption Laws**"), (B) promised, offered, provided, attempted to provide or authorized the provision of anything of value, directly or indirectly, to any person for the purpose of obtaining or retaining business, influencing any act or decision of the recipient or securing any improper advantage, or (C) made any payment of funds of the Company or any Subsidiary or received or retained any funds in violation of any Anti-Corruption Laws.

(vv) No Conflicts. Neither the execution of this Agreement, nor the issuance, offering or sale of the Securities, nor the consummation of any of the transactions contemplated herein and therein, nor the compliance by the Company with the terms and provisions hereof and thereof will conflict with, or will result in a breach of, any of the terms and provisions of, or has constituted or will constitute a default under, or has resulted in or will result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to the terms of any contract or other agreement to which the Company may be bound or to which any of the property or assets of the Company is subject, except (i) such conflicts, breaches or defaults as may have been waived and (ii) such conflicts, breaches and defaults that would not have a Material Adverse Effect; nor will such action result (x) in any violation of the provisions of the organizational or governing documents of the Company, or (y) in any material violation of the provisions of any statute or any order, rule or regulation applicable to the Company or of any Governmental Authority having jurisdiction over the Company.

(ww) Sanctions.

(i) The Company represents that, neither the Company nor any of its Subsidiaries (collectively, the "**Entity**") or, to the Company's knowledge, any director, officer, employee, agent, affiliate or representative of the Entity, is a government, individual, or entity (in this paragraph (ww), "**Person**") that is, or is owned or controlled by a Person that is:

(A) the subject of any sanctions administered or enforced by the U.S. Department of Treasury's Office of Foreign Assets Control ("**OFAC**"), the United Nations Security Council, the European Union, Her Majesty's Treasury, or other relevant sanctions authorities, including designation on OFAC's Specially Designated Nationals and Blocked Persons List or OFAC's Foreign Sanctions Evaders List (as amended, collectively, "**Sanctions**"), nor

(B) located, organized or resident in a country or territory that is the subject of Sanctions that broadly prohibit dealings with that country or territory (including Cuba, Iran, North Korea, Syria, the so-called Donetsk People's Republic, the so-called Luhansk People's Republic and the Crimea Region of the Ukraine) (the "**Sanctioned Countries**").

(ii) The Entity represents and covenants that it 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 is a Sanctioned Country; 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 Entity represents and covenants that, except as detailed in the Registration Statement and the Prospectus, for the past 5 years, it has not engaged in, is not now engaging 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 or is or was a Sanctioned Country.

(xx) Compliance with Laws. Except as would not, individually or in the aggregate, have a Material Adverse Effect, each of the Company and its Subsidiaries: (A) is and at all times has been in compliance with all statutes, rules, or regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company or its Subsidiaries (“**Applicable Laws**”); (B) has not received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any other Governmental Authority alleging or asserting noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws (“**Authorizations**”); (C) possesses all material Authorizations and such Authorizations are valid and in full force and effect and are not in material violation of any term of any such Authorizations; (D) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations and has no knowledge that any such Governmental Authority or third party has threatened any such claim, litigation, arbitration, action, suit, investigation or proceeding; (E) has not received notice that any Governmental Authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations and has no knowledge that any such Governmental Authority has threatened such action; (F) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct on the date filed (or were corrected or supplemented by a subsequent submission); and (G) has not, either voluntarily or involuntarily, initiated, conducted, or issued or caused to be initiated, conducted or issued, any recall, market withdrawal or replacement, safety alert, post sale warning, “dear healthcare provider” letter, or other notice or action relating to the alleged lack of safety or efficacy of any product or any alleged product defect or violation and, to the Company’s knowledge, no third party has initiated, conducted or intends to initiate any such notice or action.

(yy) Statistical and Market-Related Data. All statistical, demographic and market-related data included in the Registration Statement, the Time of Sale Prospectus or the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate or represent the Company's good faith estimates that are made on the basis of data derived from such sources.

(zz) Stock Exchange Listing. The Shares are registered pursuant to Section 12(b) or 12(g) of the Exchange Act and are listed on the NYSE American, LLC, and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Shares under the Exchange Act or delisting the Shares from the NYSE American, LLC, nor has the Company received any written notification that the Commission or the NYSE American, LLC is contemplating terminating such registration or listing. To the Company's knowledge, it is in compliance with all applicable listing requirements of NYSE American, LLC.

(aaa) Related-Party Transactions. There are no business relationships or related-party transactions involving the Company or any of its subsidiaries or any other person required to be described in the Registration Statement, the Time of Sale Prospectus or the Prospectus that have not been described as required.

(bbb) FINRA Matters. All of the information provided to the Underwriters or to counsel for the Underwriters by the Company, and, to the Company's knowledge, its counsel, its officers and directors and the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Securities is true, complete, correct and compliant with FINRA's rules and any letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rules is true, complete and correct.

(ccc) Parties to Lock-Up Agreements. The Company has furnished to the Underwriters a letter agreement in the form attached hereto as Exhibit A (the "**Lock-up Agreement**") from each of the persons listed on Exhibit B. If any additional persons shall become directors or executive officers of the Company prior to the end of the Company Lock-up Period (as defined below), the Company shall cause each such person, prior to or contemporaneously with their appointment or election as a director or executive officer of the Company, to execute and deliver to the Representative a Lock-up Agreement.

(ddd) Cybersecurity. The Company and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "**IT Systems**") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company as currently conducted, to the Company's knowledge, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and its subsidiaries have implemented and maintained commercially reasonable physical, technical and administrative controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data, including all "Personal Data" (defined below) and all sensitive, confidential or regulated data ("Confidential Data") used in connection with their businesses. "Personal Data" means (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) "personal data" as defined by GDPR; (iv) any information which would qualify as "protected health information" under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act (collectively, "HIPAA"); (v) any "personal information" as defined by the California Consumer Privacy Act ("CCPA"); and (vi) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person's health or sexual orientation. To the Company's knowledge, there have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same. The Company and its subsidiaries are presently in material compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems, Confidential Data, and Personal Data and to the protection of such IT Systems, Confidential Data, and Personal Data from unauthorized use, access, misappropriation or modification.

(eee) Compliance with Data Privacy Laws. The Company and its subsidiaries are, and at all prior times were, in material compliance with all applicable state and federal data privacy and security laws and regulations, including without limitation HIPAA, CCPA, and the European Union General Data Protection Regulation ("GDPR") (EU 2016/679) (collectively, the "Privacy Laws"). To ensure compliance with the Privacy Laws, the Company has in place, complies with, and takes appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, processing, disclosure, handling, and analysis of Personal Data and Confidential Data (the "Policies"). The Company has at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and none of such disclosures made or contained in any Policy have, to the Company's knowledge, been inaccurate or in violation of any applicable laws and regulatory rules or requirements in any material respect. The Company further certifies that neither it nor any subsidiary: (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law.

Any certificate signed by any officer of the Company or any of its subsidiaries and delivered to any Underwriter or to counsel for the Underwriters in connection with the offering, or the purchase and sale, of the Securities shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

The Company has a reasonable basis for making each of the representations set forth in this Section 1. The Company acknowledges that the Underwriters and, for purposes of the opinions to be delivered pursuant to Sections 6(d), (e) and (f), counsel to the Company and counsel to the Underwriters, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

2. Purchase, Sale and Delivery of the Securities

(a) The Firm Shares. Upon the terms herein set forth, the Company agrees to issue and sell to the several Underwriters an aggregate of 13,000,000 Firm Shares. On the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Underwriters agree, severally and not jointly, to purchase from the Company the respective number of Firm Shares set forth opposite their names on Schedule A. The purchase price per Firm Share to be paid by the several Underwriters to the Company shall be \$1.1811 per share.

(b) The First Closing Date. Delivery through the facilities of DTC of the Firm Shares to be purchased by the Underwriters and payment therefor shall be made at the offices of Mintz, Levin, Cohn, Ferris, Glovsky, and Popeo, P.C., One Financial Center, Boston, MA 02111 (or such other place as may be agreed to by the Company and the Representative) at 10:00 a.m., New York City time, on June 5, 2023, or such other time and date as the Representative shall designate by notice to the Company (the time and date of such closing are called the “**First Closing Date**”).

(c) The Option Shares; Option Closing Date. In addition, on the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Company hereby grants an option to the several Underwriters to purchase, severally and not jointly, up to an aggregate of 1,950,000 Option Shares from the Company at the purchase price per share to be paid by the Underwriters for the Firm Shares. The option granted hereunder may be exercised at any time and from time to time in whole or in part upon notice by the Representative to the Company, which notice may be given at any time within 30 days from the date of this Agreement. Such notice shall set forth (i) the aggregate number of Option Shares as to which the Underwriters are exercising the option and (ii) the time and date at which the Option Shares will be delivered (which time and date may be simultaneous with, but not earlier than, the First Closing Date; and in the event that such time and date are simultaneous with the First Closing Date, the term “**First Closing Date**” shall refer to the time and date of delivery of the Firm Shares and such Option Shares). Any such time and date of delivery, if subsequent to the First Closing Date, is called an “**Option Closing Date**,” shall be determined by the Representative and shall not be earlier than three or later than five full Business Days after delivery of such notice of exercise. If any Option Shares are to be purchased, (a) each Underwriter agrees, severally and not jointly, to purchase the number of Option Shares (subject to such adjustments to eliminate fractional shares as the Representative may determine) that bears the same proportion to the total number of Option Shares to be purchased as the number of Firm Shares set forth on Schedule A opposite the name of such Underwriter bears to the total number of Firm Shares and (b) the Company agrees to sell the number of Option Shares set forth in the paragraph “Introductory” of this Agreement (subject to such adjustments to eliminate fractional shares as the Representative may determine). The Representative may cancel the option at any time prior to its expiration by giving written notice of such cancellation to the Company.

(d) Public Offering of the Firm Shares and Option Shares. The Representative hereby advises the Company that the Underwriters intend to offer for sale to the public, initially on the terms set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus, their respective portions of the Firm Shares and Option Shares as soon after this Agreement has been executed as the Representative, in its sole judgment, has determined is advisable and practicable.

(e) Payment for the Firm Shares and Option Shares. (i) Payment for the Firm Shares and Option Shares shall be made at the First Closing Date (and, if applicable, at each Option Closing Date) by wire transfer of immediately available funds to the order of the Company. (ii) It is understood that the Representative has been authorized, for their own account and the accounts of the several Underwriters, to accept delivery of and receipt for, and make payment of the purchase price for, the Firm Shares and any Option Shares the Underwriters have agreed to purchase. Freedom, individually and not as the Representative of the Underwriters, may (but shall not be obligated to) make payment for any Firm Shares and Option Shares to be purchased by any Underwriter whose funds shall not have been received by the Representative by the First Closing Date or the applicable Option Closing Date, as the case may be, for the account of such Underwriter, but any such payment shall not relieve such Underwriter from any of its obligations under this Agreement.

(f) Delivery of the Firm Shares and Option Shares. The Company shall deliver, or cause to be delivered through the facilities of DTC unless the Representative shall otherwise instruct to the Representative for the accounts of the several Underwriters the Firm Shares at the First Closing Date, against the irrevocable release of a wire transfer of immediately available funds for the amount of the purchase price therefor. The Company shall also deliver, or cause to be delivered through the facilities of DTC unless the Representative shall otherwise instruct, to the Representative for the accounts of the several Underwriters, the Option Shares the Underwriters have agreed to purchase at the First Closing Date or the applicable Option Closing Date, as the case may be, against the release of a wire transfer of immediately available funds for the amount of the purchase price therefor. If the Representative so elects, delivery of the Firm Shares and Option Shares may be made by credit to the accounts designated by the Representative through The Depository Trust Company's full fast transfer or DWAC programs. The Firm Shares and Option Shares shall be registered in such names and denominations as the Representative shall have requested at least two full Business Days prior to the First Closing Date (or the applicable Option Closing Date, as the case may be). Time shall be of the essence, and delivery at the time and place specified in this Agreement is a further condition to the obligations of the Underwriters.

(g) Underwriter Warrants. At the First Closing Date, and each Option Closing Date, if any, the Company shall deliver to the Representative warrants (the "**Underwriter Warrants**") to purchase a number of shares of Common Stock (the "**Underwriter Warrant Shares**") equal to 3.0% of the sum of the number of Firm Shares and Option Shares issued on such Closing Date and Option Closing Date, as applicable, in certificated form registered in the name of the Representative (or its designees), which Underwriter Warrants shall have an exercise price of \$2.00 (157.5% of the price per Firm Share set forth in Section 2(a) hereof) subject to adjustment therein, in the form attached hereto as Exhibit C.

3. Additional Covenants of the Company.

The Company further covenants and agrees with each Underwriter as follows:

(a) RESERVED.

(b) Delivery of Registration Statement, Time of Sale Prospectus and Prospectus The Company shall furnish to the Representative in New York City, without charge, prior to 10:00 a.m., New York City time, on the Business Day next succeeding the date of this Agreement and during the period when a prospectus relating to the Securities is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Securities, as many copies of the Time of Sale Prospectus, the Prospectus and any supplements and amendments thereto or to the Registration Statement as the Representative may reasonably request.

(c) Representative's Review of Proposed Amendments and Supplements. During the period when a prospectus relating to the Securities is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), the Company (i) will furnish to the Representative for review, a reasonable period of time prior to the proposed time of filing of any proposed amendment or supplement to the Registration Statement, a copy of each such amendment or supplement and (ii) will not amend or supplement the Registration Statement (including any amendment or supplement through incorporation of any report filed under the Exchange Act) without the Representative's prior written consent, such consent not to be unreasonably withheld or delayed. Prior to amending or supplementing any preliminary prospectus, the Time of Sale Prospectus or the Prospectus (including any amendment or supplement through incorporation of any report filed under the Exchange Act), the Company shall furnish to the Representative for review, a reasonable amount of time prior to the time of filing or use of the proposed amendment or supplement, a copy of each such proposed amendment or supplement. The Company shall not file or use any such proposed amendment or supplement without the Representative's prior written consent, such consent not to be unreasonably withheld or delayed. The Company shall file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(d) Free Writing Prospectuses. The Company shall furnish to the Representative for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed free writing prospectus or any amendment or supplement thereto prepared by or on behalf of, used by, or referred to by the Company, and the Company shall not file, use or refer to any proposed free writing prospectus or any amendment or supplement thereto without the Representative's prior written consent, such consent not to be unreasonably withheld or delayed. The Company shall furnish to each Underwriter, without charge, as many copies of any free writing prospectus prepared by or on behalf of, used by or referred to by the Company as such Underwriter may reasonably request. If at any time when a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Securities (but in any event if at any time through and including the First Closing Date) there occurred or occurs an event or development as a result of which any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company conflicted or would conflict with the information contained in the Registration Statement or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made at such time, not misleading, the Company shall promptly amend or supplement such free writing prospectus to eliminate or correct such conflict so that the statements in such free writing prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made at such time, not misleading, as the case may be; provided, however, that prior to amending or supplementing any such free writing prospectus, the Company shall furnish to the Representative for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of such proposed amended or supplemented free writing prospectus, and the Company shall not file, use or refer to any such amended or supplemented free writing prospectus without the Representative's prior written consent, such consent not to be unreasonably withheld or delayed.

(e) Filing of Underwriter Free Writing Prospectuses. The Company shall not take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that such Underwriter otherwise would not have been required to file thereunder.

(f) Amendments and Supplements to Time of Sale Prospectus. If the Time of Sale Prospectus is being used to solicit offers to buy the Securities at a time when the Prospectus is not yet available to prospective purchasers, and any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Time of Sale Prospectus so that the Time of Sale Prospectus does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when delivered to a prospective purchaser, not misleading, or if any event shall occur or condition exist as a result of which the Time of Sale Prospectus conflicts with the information contained in the Registration Statement, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Time of Sale Prospectus to comply with applicable Law, the Company shall (subject to Section 3(b) and Section 3(c)) promptly prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, either amendments or supplements to the Time of Sale Prospectus so that the statements in the Time of Sale Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under the circumstances they were made when delivered to a prospective purchaser, not misleading or so that the Time of Sale Prospectus, as amended or supplemented, will no longer conflict with the information contained in the Registration Statement, or so that the Time of Sale Prospectus, as amended or supplemented, will comply with applicable Law.

(g) Certain Notifications and Required Actions. After the date of this Agreement, the Company shall promptly advise the Representative in writing of: (i) the receipt of any comments of, or requests for additional or supplemental information from, the Commission; (ii) the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus prepared, authorized or used by the Company, or the Prospectus; (iii) the time and date that any post-effective amendment to the Registration Statement becomes effective; and (iv) the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or any amendment or supplement to any preliminary prospectus, the Time of Sale Prospectus or the Prospectus or of any order preventing or suspending the use of any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus prepared, authorized or used by the Company or the Prospectus, or of any proceedings of which the Company becomes aware of to remove, suspend or terminate from listing or quotation the Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or, if the Company becomes aware of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time, the Company will use reasonable best efforts to obtain the lifting of such order as soon as practicable. Additionally, the Company agrees that it shall comply with all applicable provisions of Rule 424(b), Rule 433 and Rule 430B under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b) or Rule 433 were received in a timely manner by the Commission.

(h) Amendments and Supplements to the Prospectus and Other Securities Act Matters. If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) to a purchaser, not misleading, or if in the opinion of the Representative or counsel for the Underwriters it is otherwise necessary to amend or supplement the Prospectus to comply with applicable Law, the Company agrees (subject to Section 3(b) and Section 3(c)) to promptly prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) to a purchaser, not misleading or so that the Prospectus, as amended or supplemented, will comply with applicable Law. Neither the Representative's consent to, nor delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Section 3(b) or Section 3(c).

(i) Blue Sky Compliance. The Company shall cooperate with the Representative and counsel for the Underwriters to qualify or register the Securities for sale under (or obtain exemptions from the application of) the state securities or blue sky Laws or foreign Laws of those jurisdictions reasonably requested by the Representative, shall comply with such Laws and shall continue such qualifications, registrations and exemptions in effect so long as required for the distribution of the Securities. The Company shall not be required to qualify as a foreign corporation or to take any action that would subject it to general service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Representative promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Securities for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use commercially reasonable efforts to obtain the withdrawal thereof as soon as practicable.

(j) Use of Proceeds. The Company shall apply the net proceeds from the sale of the Securities sold by it in the manner described under the caption "Use of Proceeds" in the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(k) Transfer Agent. The Company shall engage and maintain, for a period of three years from the date of this Agreement, at its expense, a registrar and transfer agent for the Shares.

(l) Earnings Statement. The Company will make generally available to its security holders and to the Representative as soon as practicable an earnings statement (which need not be audited) covering a period of at least twelve months beginning with the first fiscal quarter of the Company commencing after the date of this Agreement that will satisfy the provisions of Section 11(a) of the Securities Act and the rules and regulations of the Commission thereunder; provided however, that the requirements of this Section 3(l) shall be satisfied to the extent that such earnings statements are available on EDGAR.

(m) Continued Compliance with Securities Laws. The Company will comply with the Securities Act and the Exchange Act so as to permit the completion of the distribution of the Securities as contemplated by this Agreement, the Registration Statement, the Time of Sale Prospectus and the Prospectus. Without limiting the generality of the foregoing, the Company will, during the period when a prospectus relating to the Securities is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), file on a timely basis with the Commission and the NYSE American, LLC all reports and documents required to be filed under the Exchange Act.

(n) Listing. The Company will use reasonable best efforts to list, subject to notice of issuance, the Offered Shares on the NYSE American, LLC.

(o) Company to Provide Copy of the Prospectus in Form That May be Downloaded from the Internet If requested by the Representative, the Company shall cause to be prepared and delivered, at its expense, within one Business Day from the effective date of this Agreement, to Freedom, an “**electronic Prospectus**” to be used by the Underwriters in connection with the offering and sale of the Securities. As used herein, the term “**electronic Prospectus**” means a form of Time of Sale Prospectus, and any amendment or supplement thereto, that meets each of the following conditions: (i) it shall be encoded in an electronic format, satisfactory to Freedom, that may be transmitted electronically by Freedom and the other Underwriters to offerees and purchasers of the Securities; (ii) it shall disclose the same information as the paper Time of Sale Prospectus, except to the extent that graphic and image material cannot be disseminated electronically, in which case such graphic and image material shall be replaced in the electronic Prospectus with a fair and accurate narrative description or tabular representation of such material, as appropriate; and (iii) it shall be in or convertible into a paper format or an electronic format, satisfactory to Freedom, that will allow investors to store and have continuously ready access to the Time of Sale Prospectus at any future time, without charge to investors (other than any fee charged for subscription to the Internet as a whole and for on-line time). The Company hereby confirms that it has included or will include in the Prospectus filed pursuant to EDGAR or otherwise with the Commission and in the Registration Statement at the time it was declared effective an undertaking that, upon receipt of a request by an investor or his or her representative, the Company shall transmit or cause to be transmitted promptly, without charge, a paper copy of the Time of Sale Prospectus.

(p) Agreement Not to Offer or Sell Additional Shares. During the period commencing on and including the date hereof and continuing through and including the 90th day following the date of the Prospectus (such period, as extended as described below, being referred to herein as the “**Lock-up Period**”), the Company will not, without the prior written consent of Freedom (which consent may be withheld in its sole discretion), directly or indirectly: (i) sell, offer to sell, contract to sell or lend any Shares or Related Securities (as defined below); (ii) effect any short sale, or establish or increase any “put equivalent position” (as defined in Rule 16a-1(h) under the Exchange Act) or liquidate or decrease any “call equivalent position” (as defined in Rule 16a-1(b) under the Exchange Act) of any Shares or Related Securities; (iii) pledge, hypothecate or grant any security interest in; (iv) in any other way transfer or dispose of any Shares or Related Securities; (v) enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of any Shares or Related Securities, regardless of whether any such transaction is to be settled in securities, in cash or otherwise; (vi) announce the offering of any Shares or Related Securities; (vii) file any registration statement under the Securities Act in respect of any Shares or Related Securities (other than as contemplated by this Agreement with respect to the Securities or a registration statement on Form S-8); or (viii) publicly announce the intention to do any of the foregoing; provided, however, that the Company may (A) effect the transactions contemplated hereby, (B) issue Shares, options to purchase Shares, or restricted stock units, or issue Shares upon exercise of options or settlement of restricted stock units, pursuant to any stock option, stock bonus or other stock plan or arrangement described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, but only if the holders of such Shares, options or restricted stock units agree in writing with the Underwriters not to sell, offer, dispose of or otherwise transfer any such Shares, options or restricted stock units during such Lock-up Period without the prior written consent of Representative (which consent may be withheld in its sole discretion) and (C) issue Shares upon the exercise of the Underwriter Warrants or the warrants outstanding as of the date hereof. For purposes of the foregoing, “**Related Securities**” shall mean any options or warrants or other rights to acquire Shares or any securities exchangeable or exercisable for or convertible into Shares, or to acquire other securities or rights ultimately exchangeable or exercisable for, or convertible into, Shares.

(q) Future Reports to the Representative. During the period of three years hereafter, the Company will furnish to the Representative, c/o Prime Executions, Inc. dba Freedom Capital Markets, 40 Wall St, 58th Floor, New York, NY 10005, Attention: Equity Syndicate Team: (i) as soon as practicable after the end of each fiscal year, copies of the Annual Report of the Company containing the balance sheet of the Company as of the close of such fiscal year and statements of income, stockholders' equity and cash flows for the year then ended and the opinion thereon of the Company's independent public or certified public accountants; (ii) as soon as practicable after the filing thereof, copies of each proxy statement, Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other report filed by the Company with the Commission, FINRA or any securities exchange; and (iii) as soon as available, copies of any report or communication of the Company furnished or made available generally to holders of its capital stock; provided, however, that the requirements of this Section 3(q) shall be satisfied to the extent that such reports, statement, communications, financial statements or other documents are available on EDGAR.

(r) Investment Limitation. The Company shall not invest or otherwise use the proceeds received by the Company from its sale of the Securities in such a manner as would require the Company or any of its subsidiaries to register as an investment company under the Investment Company Act.

(s) No Stabilization or Manipulation; Compliance with Regulation M. The Company will not take, and will ensure that no affiliate of the Company will take, directly or indirectly, without giving effect to activities by the Underwriters, any action designed to or that would reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares or any reference security with respect to the Shares, whether to facilitate the sale or resale of the Securities or otherwise, and the Company will, and shall cause each of its affiliates to, comply with all applicable provisions of Regulation M.

(t) Enforce Lock-Up Agreements. During the Lock-up Period, the Company will enforce all agreements between the Company and any of its security holders that restrict or prohibit, expressly or in operation, the offer, sale or transfer of Shares or Related Securities or any of the other actions restricted or prohibited under the terms of the form of Lock-up Agreement. In addition, the Company will direct the transfer agent to place stop transfer restrictions upon any such securities of the Company that are bound by such "lock-up" agreements for the duration of the periods contemplated in such agreements, including "lock-up" agreements entered into by the Company's executive officers and directors pursuant to Section 6(j) hereof.

(u) Company to Provide Interim Financial Statements. Prior to the First Closing Date and each applicable Option Closing Date, the Company will furnish the Underwriters, as soon as they have been prepared by or are available to the Company, a copy of any unaudited interim financial statements of the Company for any period subsequent to the period covered by the most recent financial statements appearing in the Registration Statement and the Prospectus, provided however, that the requirements of this Section 3(u) shall be satisfied to the extent that such financial statements are available on EDGAR.

(v) 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 Option Shares pursuant to the options and shares of Common Stock pursuant to any exercise of the Underwriter Warrants.

The Representative, on behalf of the several Underwriters, may, in its sole discretion, waive in writing the performance by the Company of any one or more of the foregoing covenants or extend the time for their performance.

4. Payment of Expenses. The Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including (i) all expenses incident to the issuance and delivery of the Securities (including all printing and engraving costs), (ii) all fees and expenses of the registrar and transfer agent of the Shares, (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Securities to the Underwriters, (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors, (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Time of Sale Prospectus, the Prospectus, each free writing prospectus prepared by or on behalf of, used by, or referred to by the Company, and each preliminary prospectus, and all amendments and supplements thereto, and this Agreement, (vi) all filing fees in connection with the review and qualification of the offering of the Securities by FINRA and qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Securities for offer and sale under the state securities or blue sky Laws, (vii) up to \$90,000 for the Underwriters' reasonable, necessary and documented out of pocket expenses relating to the Offering, including the fees and expenses of counsel to the Underwriters, (viii) the costs and expenses of the Company relating to investor presentations on any "road show", including expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the employees and officers of the Company and any such consultants, (ix) the fees and expenses associated with listing the Offered Shares on the NYSE American, LLC, and (x) all other fees, costs and expenses of the nature referred to in Item 13 of Part II of the Registration Statement. Any such undisputed amount payable to the Underwriters may be deducted from the purchase price for the Securities. Except as provided in this Section 4 or in Section 7, Section 9 or Section 10, the Underwriters shall pay their own expenses, including the fees and disbursements of their counsel, and all travel, lodging and other expenses of the Underwriters or any of their respective employees incurred by them in connection with any road show.

5. Covenant of the Underwriters. Each Underwriter severally and not jointly covenants with the Company not to take any action that would result in the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that otherwise would not, but for such actions, be required to be filed by the Company under Rule 433(d).

6. Conditions of the Obligations of the Underwriters. The respective obligations of the several Underwriters hereunder to purchase and pay for the Securities as provided herein on the First Closing Date and, with respect to the Option Shares, each Option Closing Date, shall be subject to the accuracy of the representations and warranties on the part of the Company set forth in Section 1 as of the date hereof and as of the First Closing Date as though then made and, with respect to the Option Shares, as of each Option Closing Date as though then made, to the timely performance by the Company of its covenants and other obligations hereunder, and to each of the following additional conditions:

(a) Comfort Letter. On the date hereof, the Representative shall have received from Sadler, Gibb & Associates LLC, independent registered public accountants for the Company, a letter dated the date hereof addressed to the Underwriters, in form and substance satisfactory to the Representative, containing statements and information of the type ordinarily included in accountant's "comfort letters" to underwriters, delivered according to Statement of Auditing Standards No. 72 (or any successor bulletin), with respect to the audited and unaudited financial statements and certain financial information contained in the Registration Statement, the Time of Sale Prospectus, and each free writing prospectus, if any.

(b) Compliance with Registration Requirements; No Stop Order; No Objection from FINRA. For a period from and after the date of this Agreement and through and including the First Closing Date and, with respect to any Option Shares purchased after the First Closing Date, each Option Closing Date:

(i) The Company shall have filed the Prospectus with the Commission (including the information required by Rule 430A under the Securities Act) in the manner and within the time period required by Rule 424(b) under the Securities Act; or the Company shall have filed a post-effective amendment to the Registration Statement containing the information required by such Rule 430A, and such post-effective amendment shall have become effective.

(ii) No stop order suspending the effectiveness of the Registration Statement or any post-effective amendment to the Registration Statement shall be in effect, and no proceedings for such purpose shall have been instituted or threatened by the Commission.

(iii) FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(c) No Material Adverse Effect or Ratings Agency Change. For the period from and after the date of this Agreement and through and including the First Closing Date and, with respect to any Option Shares purchased after the First Closing Date, each Option Closing Date, in the judgment of the Representative there shall not have occurred any material adverse change in the authorized capital stock of the Company or any Material Adverse Effect or any development that would cause a Material Adverse Effect, or a downgrading in or withdrawal of the rating assigned to any of the Company's securities (other than asset backed securities) by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities (other than asset backed securities), the effect of which, in the case of any such action by a rating organization described above, would cause a Material Adverse Effect.

(d) Opinion of Counsel for the Company. On each of the First Closing Date and each Option Closing Date the Representative shall have received the opinion and negative assurance letter of Stradling Yocca Carlson & Rauth, P.C., counsel for the Company, dated as of such date, in form and substance satisfactory to the Representative.

(e) Opinion of Intellectual Property Counsel. On each of the First Closing Date and each Option Closing Date, the Representative shall have received the opinion of Sagittarius IP, counsel for the Company with respect to intellectual property matters, dated as of such date, in form and substance satisfactory to the Representative.

(f) Opinion of Counsel for the Underwriters. On each of the First Closing Date and each Option Closing Date the Representative shall have received the opinion of Mintz, Levin Cohn, Ferris, Glovsky, and Popeo, P.C., counsel for the Underwriters in connection with the offer and sale of the Securities, in form and substance satisfactory to the Representative, dated as of such date.

(g) Officers' Certificate. On each of the First Closing Date and each Option Closing Date, the Representative shall have received a certificate executed by the Chief Executive Officer or President of the Company and the Chief Financial Officer of the Company, dated as of such date, to the effect set forth in Section 6(b)(ii) and further to the effect that:

(i) for the period from and including the date of this Agreement through and including such date, there has not occurred any Material Adverse Effect;

(ii) the representations, warranties and covenants of the Company set forth in Section 1 are true and correct with the same force and effect as though expressly made on and as of such date; and

(iii) the Company has complied with all the agreements hereunder and satisfied all the conditions on its part to be performed or satisfied hereunder at or prior to such date.

(h) RESERVED.

(i) Bring-down Comfort Letter. On each of the First Closing Date and each Option Closing Date the Representative shall have received from Sadler, Gibb & Associates LLC, independent registered public accountants for the Company, a letter dated such date, in form and substance satisfactory to the Representative, which letter shall: (i) reaffirm the statements made in the letter furnished by them pursuant to Section 6(a), except that the specified date referred to therein for the carrying out of procedures shall be no more than three Business Days prior to the First Closing Date or the applicable Option Closing Date, as the case may be; and (ii) cover certain financial information contained in the Prospectus.

(j) Lock-Up Agreements. On or prior to the date hereof, the Company shall have furnished to the Representative an agreement in the form of Exhibit A hereto from the directors and executive officers listed on Exhibit B hereto, and each such agreement shall be in full force and effect on each of the First Closing Date and each Option Closing Date.

(k) Underwriter Warrants. At the First Closing Date, the Underwriter Warrants and, as to each Option Closing Date, if any, the additional Underwriter Warrants, in definitive form, in such denominations and registered in such names as the Representative or its designees request, shall have been delivered to the several Underwriters.

(l) Rule 462(b) Registration Statement. In the event that a Rule 462(b) Registration Statement is filed in connection with the offering contemplated by this Agreement, such Rule 462(b) Registration Statement shall have been filed with the Commission on the date of this Agreement and shall have become effective automatically upon such filing.

(m) NYSE American. The Company shall have submitted a listing of additional shares notification form to the NYSE American, LLC with respect to the Offered Shares and shall have received no objection thereto from the NYSE American, LLC.

(n) Additional Documents. On or before each of the First Closing Date and each Option Closing Date, the Representative and counsel for the Underwriters shall have received such information, documents and opinions as they may reasonably request for the purposes of enabling them to pass upon the issuance and sale of the Securities as contemplated herein, or in order to evidence the accuracy of any of the representations and warranties, or the satisfaction of any of the conditions or agreements, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Securities as contemplated herein and in connection with the other transactions contemplated by this Agreement shall be reasonably satisfactory in form and substance to the Representative and counsel for the Underwriters.

If any condition specified in this Section 6 is not satisfied when and as required to be satisfied, this Agreement may be terminated by the Representative by notice from the Representative to the Company at any time on or prior to the First Closing Date and, with respect to the Option Shares, at any time on or prior to the applicable Option Closing Date, which termination shall be without liability on the part of any party to any other party, except that Section 4, Section 7, Section 9 and Section 10 shall at all times be effective and shall survive such termination.

7. Reimbursement of Underwriters' Expenses. Notwithstanding anything in this Agreement to the contrary, if this Agreement is terminated by the Representative other than pursuant to Section 12, then the Company shall not pay or reimburse any costs, fees or expenses of the Underwriters. Additionally, in the event the Agreement is terminated pursuant to Section 11, the Company will not pay or reimburse any costs, fees or expenses incurred by any Underwriter that defaults on its obligations to purchase the Shares.

8. Effectiveness of this Agreement. This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

9. Indemnification.

(a) Indemnification of the Underwriters. The Company agrees to indemnify and hold harmless each Underwriter, its affiliates and their respective partners, members, directors, officers, employees and agents, and each person, if any, who controls each Underwriter or any affiliate within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading, or arising out of any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus, Time of Sale Prospectus, any free writing prospectus prepared, authorized or used by the Company, any Marketing Material, or the Prospectus (or any amendment or supplement to the foregoing), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any Governmental Authority, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that (subject to Section 9(d)) any such settlement is effected with the written consent of the Company, which consent shall not unreasonably be delayed, conditioned or withheld; and

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any Governmental Authority, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission (whether or not a party), to the extent that any such expense is not paid under (i) or (ii) above;

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made solely in reliance upon and in conformity with the Underwriter Information (as defined below).

(b) Indemnification of the Company, its Directors and Officers. Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, and its directors, each officer of the Company who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 9(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus, or the Prospectus (or any amendment or supplement to the foregoing), in reliance upon and in conformity with information relating to such Underwriter and furnished to the Company in writing by such Underwriter or Underwriters expressly for use therein. The Company hereby acknowledges that the only information that the Underwriter or Underwriters has furnished to the Company expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus, or the Prospectus (or any amendment or supplement to the foregoing) are the statements set forth in the in the Preliminary Prospectus and Prospectus under the caption "Underwriting" in the third paragraph and in the fifth sentence under the first paragraph under the subheading "Stabilization" (the "**Underwriter Information**").

(c) **Notifications and Other Indemnification Procedures.** Any party that proposes to assert the right to be indemnified under this Section 9 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 9, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 9 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 9 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any other legal expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the named parties to any such action (including any impleaded parties) include both the indemnified party and the indemnifying party and the indemnified party has been advised by counsel that there is an conflict of interest that prevents the counsel designated by the indemnifying party to represent both the indemnified party and any other party represented or proposed to be represented by such counsel (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (3) the indemnifying party has not in fact employed counsel to assume the defense of such action or counsel reasonably satisfactory to the indemnified party, in each case, within a reasonable time after receiving notice of the commencement of the action; in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction (plus local counsel) at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly as they are incurred. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 9 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an express and unconditional release of each indemnified party, in form and substance reasonably satisfactory to such indemnified party, from all liability arising out of such litigation, investigation, proceeding or claim and (2) does not include a statement as to an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) Settlement Without Consent if Failure to Reimburse. If an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for reasonable fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 9(a)(ii) effected without its written consent if (1) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (2) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (3) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

10. Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of Section 9 is applicable in accordance with its terms but for any reason is held to be unavailable or insufficient from the Company or the Underwriters, the Company and the Underwriters will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted) to which any indemnified party may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other hand. The relative benefits received by the Company on the one hand and the Underwriters on the other hand shall be deemed to be in the same proportion as the total net proceeds from the sale of the Securities (before deducting expenses) received by the Company bear to the total compensation received by the Underwriters (before deducting expenses) from the sale of Securities on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable Law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and the Underwriters, on the other hand, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Section 10 were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 10 shall be deemed to include, for the purpose of this Section 10, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with Section 9(c). Notwithstanding the foregoing provisions of Section 9 and this Section 10, the Underwriters shall not be required to contribute any amount in excess of the commissions actually received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 10, any person who controls a party to this Agreement within the meaning of the Securities Act, any affiliates of the respective Underwriters and any officers, directors, partners, employees or agents of the Underwriters or their respective affiliates, will have the same rights to contribution as that party, and each director of the Company and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 10, will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 10 except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 9(c), no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 9(c).

11. Default of One or More of the Several Underwriters. If, on the First Closing Date or any Option Closing Date, any one or more of the several Underwriters shall fail or refuse to purchase Securities that it or they have agreed to purchase hereunder on such date, and the aggregate number of Securities which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase does not exceed 10% of the aggregate number of the Securities to be purchased on such date, the Representative may make arrangements satisfactory to the Company for the purchase of such Securities by other persons, including any of the Underwriters, but if no such arrangements are made by such date, the other Underwriters shall be obligated, severally and not jointly, in the proportions that the number of Firm Shares set forth opposite their respective names on Schedule A bears to the aggregate number of Firm Shares set forth opposite the names of all such non-defaulting Underwriters, or in such other proportions as may be specified by the Representative with the consent of the non-defaulting Underwriters, to purchase the Securities which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase on such date. If, on the First Closing Date or any Option Closing Date, any one or more of the several Underwriters shall fail or refuse to purchase Securities that it or they have agreed to purchase hereunder on such date, and the aggregate number of Securities which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase exceeds 10% of the aggregate number of Securities to be purchased on such date, and arrangements satisfactory to the Representative and the Company for the purchase of such Securities are not made within 48 hours after such default, this Agreement shall terminate without liability of any party to any other party except that the provisions of Section 4, Section 7, Section 9 and Section 10 shall at all times be effective and shall survive such termination. In any such case either the Representative or the Company shall have the right to postpone the First Closing Date or the applicable Option Closing Date, as the case may be, but in no event for longer than seven days in order that the required changes, if any, to the Registration Statement and the Prospectus or any other documents or arrangements may be effected.

As used in this Agreement, the term “**Underwriter**” shall be deemed to include any person substituted for a defaulting Underwriter under this Section 11. Any action taken under this Section 11 shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

12. Termination of this Agreement. Prior to the purchase of the Firm Shares by the Underwriters on the First Closing Date, this Agreement may be terminated by the Representative by notice given to the Company if at any time: (i) trading or quotation in any of the Company's securities shall have been suspended or limited by the Commission or by the NYSE American, LLC, or trading in securities generally on either the NASDAQ or the NYSE shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges; (ii) a general banking moratorium shall have been declared by any of federal or New York authorities; (iii) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States' or international political, financial or economic conditions, as in the reasonable judgment of the Representative is material and adverse and makes it impracticable to market the Securities in the manner and on the terms described in the Time of Sale Prospectus or the Prospectus or to enforce contracts for the sale of securities; (iv) there shall have occurred any material adverse change in the condition, financial or otherwise, or in the business, properties, earnings, results of operations or prospects of the Company and its Subsidiaries considered as one enterprise, , which would make it in the Representative's reasonable judgment impractical to proceed with the Offering; (v) the Company shall have sustained a material loss by strike, fire, flood, earthquake, accident or other calamity of such character as in the reasonable judgment of the Representative makes it inadvisable to proceed with the Offering, whether or not such loss shall have been insured, or (vi) the Company fails to proceed with the Offering in good faith or commits gross negligence or willful misconduct in connection with the Offering. Any termination pursuant to this Section 12 shall be without liability on the part of (a) the Company to any Underwriter, except that the Company shall be obligated to reimburse the actual and accountable out-of-pocket expenses of the Underwriters related to the transactions contemplated herein then due and payable, including the fees and disbursements of counsel to the Underwriters, up to an aggregate of \$40,000 or (b) any Underwriter to the Company; provided, however, that the provisions of Section 9 and Section 10 shall at all times be effective and shall survive such termination.

13. No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (a) the purchase and sale of the Securities pursuant to this Agreement, including the determination of the public offering price of the Securities and any related discounts and commissions, is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the offering contemplated hereby and the process leading to such transaction, each Underwriter is and has been acting solely as a principal and is not the agent or fiduciary of the Company, or its stockholders, or its creditors, employees or any other party, (c) no Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) and no Underwriter has any obligation to the Company with respect to the offering contemplated hereby except the obligations expressly set forth in this Agreement, (d) the Underwriters and their respective affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the offering contemplated hereby and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

14. Representations and Agreements to Survive Delivery. The respective indemnities, agreements, representations, warranties and other statements of the Company, its officers and the several Underwriters set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Company or any of its or their partners, affiliates, officers, directors or employees or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Securities sold hereunder and any termination of this Agreement.

15. Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Representative: Prime Executions, Inc. dba Freedom Capital Markets
40 Wall St, 58th Floor
New York, NY 10005
Facsimile: 646-390-3100
Attention: Equity Syndicate Team

with a copy to: Mintz, Levin, Cohn, Ferris, Glovsky, and Popeo, P.C.
One Financial Center
Boston, MA 02111
Attention: John Rudy
Email: JRudy@mintz.com

If to the Company: VolitionRx Limited
1489 West Warm Springs Road
Suite 110 Henderson
Nevada 89014
Attention: Cameron Reynolds
Email: c.reynolds@volitionrx.com

with a copy to: Stradling Yocca Carlson & Rauth, P.C.
660 Newport Center Drive, Suite 1600
Newport Beach, CA 92660
Attention: Marc G. Alcser, Esq.
Email: malcser@sycr.com

Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day or, if such day is not a Business Day, on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid).

16. Electronic Notice. An electronic communication (“**Electronic Notice**”) shall be deemed written notice for purposes of this Section 16 if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives verification of receipt by the receiving party. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form (“**Nonelectronic Notice**”) which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

17. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and the Underwriters and their respective successors and the parties referred to in Section 11. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; provided, however, that the Representative may assign its rights and obligations hereunder to an affiliate thereof without obtaining the Company’s consent.

18. Partial Unenforceability. The invalidity or unenforceability of any section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph or provision hereof. If any section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

19. Entire Agreement; Amendment; Severability; Waiver. This Agreement (including all schedules and exhibits attached hereto issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Representative. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement. No implied waiver by a party shall arise in the absence of a waiver in writing signed by such party. No failure or delay in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power, or privilege hereunder.

20. **GOVERNING LAW AND TIME; WAIVER OF JURY TRIAL.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAWS. SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME. EACH PARTY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

21. **CONSENT TO JURISDICTION.** EACH PARTY 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 WITH ANY TRANSACTION CONTEMPLATED HEREBY, 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 BROUGHT IN AN INCONVENIENT FORUM OR THAT THE VENUE OF SUCH SUIT, ACTION OR PROCEEDING IS IMPROPER. 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 (CERTIFIED OR REGISTERED MAIL, RETURN RECEIPT REQUESTED) 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 MANNER PERMITTED BY LAW.

22. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile or electronic transmission.

23. Construction.

(a) the section and exhibit headings herein are for convenience only and shall not affect the construction hereof;

(b) words defined in the singular shall have a comparable meaning when used in the plural, and vice versa;

(c) the words "hereof," "hereto," "herein" and "hereunder" and words of similar import, when used in this Agreement, shall refer to this Agreement as a whole and not to any particular provision of this Agreement;

(d) wherever the word “include,” “includes” or “including” is used in this Agreement, it shall be deemed to be followed by the words “without limitation”;

(e) references herein to any gender shall include each other gender;

(f) references herein to any law, statute, ordinance, code, regulation, rule or other requirement of any Governmental Authority shall be deemed to refer to such law, statute, ordinance, code, regulation, rule or other requirement of any Governmental Authority as amended, reenacted, supplemented or superseded in whole or in part and in effect from time to time and also to all rules and regulations promulgated thereunder;

(g) if the last day for the giving of any notice or the performance of any act required or permitted under this Agreement is a day that is not a Business Day, then the time for the giving of such notice or the performance of such action shall be extended to the next succeeding Business Day;

(h) “**knowledge**” means, as it pertains to the Company, the actual knowledge of the executive officers and directors of the Company, together with the knowledge which they would have had if they had conducted a reasonable inquiry of the relevant persons into the relevant subject matter;

(i) “**Governmental Authority**” means (i) any federal, provincial, state, local, municipal, national or international government or governmental authority, regulatory or administrative agency, governmental commission, department, board, bureau, agency or instrumentality, court, tribunal, arbitrator or arbitral body (public or private); (ii) any self-regulatory organization; or (iii) any political subdivision of any of the foregoing;

(j) “**Law**” means any and all laws, including all federal, state, local, municipal, national or foreign statutes, codes, ordinances, guidelines, decrees, rules, regulations and by-laws and all judicial, arbitral, administrative, ministerial, departmental or regulatory judgments, orders, directives, decisions, rulings or awards or other requirements of any Governmental Authority, binding on or affecting the person referred to in the context in which the term is used and rules, regulations and policies of any stock exchange on which securities of the Company are listed for trading; and

(k) “**Business Day**” means any day on which the NYSE American, LLC and commercial banks in the City of New York are open for business.

24. General Provisions.

Each of the parties hereto acknowledges that it is a sophisticated business person who was adequately represented by counsel during negotiations regarding the provisions hereof, including the indemnification provisions of Section 9 and the contribution provisions of Section 10, and is fully informed regarding said provisions. Each of the parties hereto further acknowledges that the provisions of Section 9 and Section 10 hereof fairly allocate the risks in light of the ability of the parties to investigate the Company, its affairs and its business in order to assure that adequate disclosure has been made in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, each free writing prospectus and the Prospectus (and any amendments and supplements to the foregoing), as contemplated by the Securities Act and the Exchange Act.

[Signature Page Follows]

If the foregoing correctly sets forth the understanding between the Company and the Underwriters, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between the Company and the Underwriters.

Very truly yours,

VOLITIONRX LIMITED

By: /s/ Cameron Reynolds

Name: Cameron Reynolds

Title: President and Chief Executive Officer

ACCEPTED as of the date first-above written:

PRIME EXECUTIONS, INC. DBA FREEDOM
CAPITAL MARKETS

By: /s/ Robert Wotczak

Name: Robert Wotczak

Title: President and Chief Executive Officer

For itself and the other several Underwriters named in
Schedule A to this Agreement.

SIGNATURE PAGE

VOLITION – UNDERWRITING AGREEMENT

SCHEDULE A

Underwriters	Number of Firm Shares to be Purchased
Prime Executions, Inc. dba Freedom Capital Markets	12,350,000
Bancroft Capital, LLC	650,000
Total	13,000,000

SCHEDULE B

Free Writing Prospectuses Included in the Time of Sale Prospectus

None.

SCHEDULE C

Pricing Information

Firm Shares:	13,000,000
Option Shares:	1,950,000
Price to Public:	\$ 1.27
Underwriters' Purchase Price:	\$ 1.1811

Form of Lock-up Agreement

_____, 2023

Prime Executions, Inc. dba Freedom Capital Markets
40 Wall St, 58th Floor
New York, NY 10005

Re: Proposed Registered Follow-On Offering by VolitionRx Limited

Ladies and Gentlemen:

This Letter Agreement is being delivered to you, a holder of common stock, par value \$0.001 per share ("Common Stock"), or rights to acquire Common Stock, of VolitionRx Limited, a Delaware corporation (the "Company"), in connection with the proposed Underwriting Agreement (the "Agreement") to be entered into by and between the Company and Prime Executions, Inc. dba Freedom Capital Markets ("Freedom"), with respect to the proposed public offering of securities of the Company (the "Securities") pursuant to a registration statement (the "Registration Statement") on Form S-3, as amended (File No. 333-259783; the "Offering").

In consideration of Freedom's agreement to enter into the Agreement and to proceed with the Offering of the Securities, and for other good and valuable consideration, receipt of which is hereby acknowledged, the undersigned hereby agrees for the benefit of the Company and the Underwriters (as defined in the Agreement) that, without the prior written consent of Freedom, the undersigned will not, during the period ending 90 days (the "Lock-Up Period") after the date of the final prospectus supplement relating to the Offering (the "Prospectus Supplement"), directly or indirectly (1) offer, pledge, assign, encumber, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock owned either of record or beneficially (as defined in the Securities Exchange Act of 1934, as amended (the "Exchange Act")) by the undersigned on the date hereof or hereafter acquired, other than Securities acquired in the Offering, or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock, other than Securities acquired in the Offering, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, or publicly announce an intention to do any of the foregoing. In addition, the undersigned agrees that, without the prior written consent of Freedom, it will not, during the Lock-Up Period, make any demand for or exercise any right with respect to, the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock.

The limitations set forth in the foregoing paragraph shall not apply to (a) transactions relating to shares of Common Stock or other securities acquired in the Offering or in open market transactions after the completion of the Offering, provided that no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with subsequent sales of Common Stock or other securities acquired in the Offering or in such open market transactions; (b) transfers of shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock (i) as a bona fide gift or for bona fide estate planning purposes, (ii) upon death or by will, testamentary document or intestate succession, (iii) to an immediate family member of the undersigned or to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned (for purposes of this Agreement, "immediate family" shall mean any relationship by blood, current or former marriage or adoption, not more remote than first cousin), (iv) not involving a change in beneficial ownership (as calculated in accordance with Section 13(d) of the Exchange Act), (v) if the undersigned is a trust, to any beneficiary of the undersigned or the estate of any such beneficiary, (vi) to a charity or educational institution, (vii) by operation of law, such as pursuant to a qualified domestic order, divorce settlement, divorce decree, separation agreement or other court order, (viii) to any corporation, partnership, limited liability company, or other business entity all of the equity holders of which consist of the undersigned and/or the immediate family of the undersigned, or (ix) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of the undersigned or (B) in the form of a distribution to limited partners, limited liability company members or stockholders of the undersigned; (c) distributions or transfers of shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock to stockholders, direct or indirect affiliates (within the meaning set forth in Rule 405 under the Securities Act of 1933, as amended), current or former partners (general or limited), members or managers of the undersigned, as applicable, or to the estates of any such stockholders, affiliates, partners, members or managers; (d) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act, provided that (i) such plan does not provide for the transfer of shares of Common Stock during the Lock-Up Period and (ii) no public announcement or filing under the Exchange Act regarding the establishment of such plan shall be required or shall be voluntarily made by or on behalf of the undersigned or the Company during the Lock-Up Period; and (e) sales of Common Stock pursuant to the terms of the Agreement, *provided*, in the case of clauses (b)-(c), that such transfer shall not involve a disposition for value and the donee, trustee, distributee or transferee agrees in writing with Freedom and the Company to be bound by the terms hereof.

Moreover, the foregoing restrictions shall not apply to (i) the exercise of stock options, warrants, or other equity awards or settlement of restricted stock units granted pursuant to the Company's equity incentive plans prior to the date of the Prospectus Supplement; (ii) cashless "net" exercises of options and warrants held by the undersigned; (iii) shares withheld for the payment of taxes upon the settlement of restricted stock units; (iv) the receipt by the undersigned of any securities of the Company directly from the Company, including, but not limited to, shares of Common Stock and stock options granted pursuant to the Company's equity incentive plans, and warrants exercisable for securities of the Company; and (v) transfers in connection with a change of control of the Company; *provided* that any securities of the Company issued upon exercise thereof shall continue to be subject to the terms of this Letter Agreement and that any filing under Section 16(a) of the Exchange Act made in connection with such exercise shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this clause.

In furtherance of the foregoing, the Company, and any duly appointed transfer agent for the registration or transfer of the securities described herein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Letter Agreement.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Letter Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned understands that, if the Agreement does not become effective, or if the Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Common Stock to be sold thereunder, the undersigned shall be released from all obligations under this Letter Agreement.

The undersigned, whether or not participating in the Offering, understands that Freedom is entering into the Agreement and proceeding with the Offering in reliance upon this Letter Agreement.

[Signature page follows.]

This Letter Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to the conflict of laws principles thereof (other than New York General Obligations Law § 5-1401).

Very truly yours,

[STOCKHOLDER]

By: _____
Name:
Title:

Parties to Lock-up Agreement

[Omitted]

Form of Underwriter Warrant

[Omitted]

UNDERWRITER COMMON STOCK PURCHASE WARRANT

VOLITIONRX LIMITED

Warrant Shares: 390,000

Initial Exercise Date: December 4, 2023

THIS UNDERWRITER COMMON STOCK PURCHASE WARRANT (the “Warrant”) certifies that, for value received, Prime Executions, Inc., doing business as Freedom Capital Markets, or its assigns (the “Holder”) is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date set forth above (the “Initial Exercise Date”) and on or prior to 5:00 p.m. (New York City time) on June 5, 2028 (the “Termination Date”) but not thereafter, to subscribe for and purchase from VolitionRx Limited, a Delaware corporation (the “Company”), up to 390,000 shares (as subject to adjustment hereunder, the “Warrant Shares”) of the Company’s common stock, par value \$0.001 per share (the “Common Stock”). The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). This Warrant is being issued pursuant to that certain Underwriting Agreement (the “Underwriting Agreement”), dated June 1, 2023, between the Company and Freedom Capital Markets (“Freedom”).

Section 1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in the Underwriting Agreement.

Section 2. Exercise.

(a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Business Days and (ii) the number of Business Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the Warrant Shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. 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 be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation as soon as reasonably practicable of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. **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.**

(b) Exercise Price. The exercise price per share of Common Stock under this Warrant shall be \$2.00, subject to adjustment hereunder (the "Exercise Price").

(c) Cashless Exercise. This Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable:

(i) the VWAP on the Business Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Business Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Business Day prior to the opening of "regular trading hours" (as defined in Rule 600(b) of Regulation NMS promulgated under the federal securities laws) on such Business Day,

(ii) at the option of the Holder, either (y) the VWAP on the Business Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the NYSE American, LLC ("Trading Market") as reported by Bloomberg L.P. ("Bloomberg") as of the time of the Holder's execution of the applicable Notice of Exercise if such Notice of Exercise is executed during "regular trading hours" on a Business Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Business Day) pursuant to Section 2(a) hereof, or

(iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Business Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of "regular trading hours" on such Business Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

“Bid Price” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg (based on a Business Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Company and reasonably acceptable to the Holder, the fees and expenses of which shall be paid by the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg (based on a Business Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Company and reasonably acceptable to the Holder, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in such a cashless exercise, and if at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the resale of the Warrant Shares by the Holder, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

Notwithstanding anything herein to the contrary, if on the Termination Date there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant shall be automatically exercised via cashless exercise pursuant to this Section 2(c).

(d) Mechanics of Exercise.

(i) Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the VStock Transfer, LLC (the “Transfer Agent”) to the Holder by crediting the account of the Holder’s or its designee’s balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system (“DWAC”) if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (B) the Warrant Shares are eligible for resale by the Holder without volume or manner-of-sale limitations pursuant to Rule 144 (assuming cashless exercise of the Warrants), and otherwise by physical delivery of a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Business Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Business Day after delivery of the aggregate Exercise Price to the Company, and (iii) the number of Business Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the “Warrant Share Delivery Date”). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Business Days, and (ii) the number of Business Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$5 per Business Day (increasing to \$10 per Business Day on the third Business Day after the Warrant Share Delivery Date) for each Business Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to use commercially reasonable efforts to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, “Standard Settlement Period” means the standard settlement period, expressed in a number of Business Days, on the Company’s primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

(ii) Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

(iii) Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

(iv) Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, 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 (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a 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.

(v) No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

(vi) Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto as Exhibit B duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for electronic delivery of the Warrant Shares.

(vii) Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

(e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates (as defined below), and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents (as defined below)) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one (1) Business Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant. "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. "Common Stock Equivalents" means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

Section 3. Certain Adjustments.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

(b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares 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 on exercise hereof, including without limitation, the Beneficial Ownership Limitation) 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 shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

(c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise, other than cash (including, without limitation, any distribution of stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, 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 on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of 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, however, that to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

(d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (or any Subsidiary), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock or 50% or more of the voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization 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, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires 50% or more of the outstanding shares of Common Stock or 50% or more of the voting power of the common equity of the Company (each a “Fundamental Transaction”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder’s option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, that if the Fundamental Transaction is not within the Company’s control, including not approved by the Company’s Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction; provided, further, that if holders of Common Stock of the Company are not offered or paid any consideration in such Fundamental Transaction, such holders of Common Stock will be deemed to have received common stock of the Successor Entity (which Entity may be the Company following such Fundamental Transaction) in such Fundamental Transaction. “Black Scholes Value” means the value of this Warrant based on the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Business Day immediately following the public announcement of the applicable Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the greater of (i) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (ii) the highest VWAP during the period beginning on the Business Day immediately preceding the public announcement of the applicable Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Business Day of the Holder’s request pursuant to this Section 3(d) and (D) a remaining option time equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date and (E) a zero cost of borrow. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds (or such other consideration) within the later of (i) five Business Days of the Holder’s election and (ii) the date of consummation of the Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall be added to the term “Company” under this Warrant (so that from and after the occurrence or consummation of such Fundamental Transaction, each and every provision of this Warrant referring to the “Company” shall refer instead to each of the Company and the Successor Entity or Successor Entities, jointly and severally), and the Successor Entity or Successor Entities, jointly and severally with the Company, may exercise every right and power of the Company prior thereto and the Successor Entity or Successor Entities shall assume all of the obligations of the Company prior thereto under this Warrant with the same effect as if the Company and such Successor Entity or Successor Entities, jointly and severally, had been named as the Company herein.

(e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

(f) Notice to Holder.

(i) Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

(ii) Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (or any of its Subsidiaries) is a party, any sale or transfer of all or substantially all of its assets, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by email to the Holder at its last email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. The Holder agrees to maintain any information disclosed pursuant to this Section 3(f)(ii) in confidence until such information is publicly available, and shall comply with applicable law with respect to trading in the Company's securities following receipt any such information.

(g) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market, the Company may at any time during the term of this Warrant reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

Section 4. Transfer of Warrant.

(a) Transferability. Pursuant to FINRA Rule 5110(e), neither this Warrant nor any Warrant Shares issued upon exercise of this Warrant shall be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days beginning on the date of commencement of sales of the offering pursuant to which this Warrant is being issued, except:

(i) the transfer of any security by operation of law or by reason of reorganization of the Company;

(ii) the transfer of any security to any FINRA member firm participating in the offering and the officers, partners, registered persons or affiliates thereof, if all securities so transferred remain subject to the lock-up restriction in this Section 4(a) for the remainder of the time period;

(iii) if the aggregate amount of securities of the Company held by the Holder or a related person does not exceed 1% of the securities being offered;

(iv) if the security is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund, and participating members in the aggregate do not own more than 10% of the equity in the fund; or

(v) the exercise or conversion of any security, if all securities received remain subject to the lock-up restriction in this Section 4(a) for the remainder of the time period;

(vi) if the Company meets the registration requirements of Forms S-3, F-3 or F-10; or

(vii) the transfer of any security back to the Company in a transaction exempt from registration with the Commission.

Subject to the foregoing restriction, this Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

(b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the issue date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

(c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner 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.

Section 5. Demand Registrations. To the extent the Company does not maintain an effective registration statement for the Warrant Shares, then for a period commencing on the Initial Exercise Date and terminating on the Termination Date, the Holder is entitled to one “demand” registration right at the Company’s expense and one “demand” registration right at the Holder’s expense, each such right to be exercised not later than the Termination Date. Upon receipt of a demand registration request from the registered Holder, the Company shall file a registration statement on Form S-3 (“Form S-3”) or, if Form S-3 is not available, on any other appropriate form, including Form S-1, within 60 days of demand thereof registering the Warrant Shares and use commercially reasonable efforts to cause such registration statement to become effective within 120 days thereof. A registration requested pursuant to this Section 5 shall not be deemed to have been effected: (a) unless a registration statement with respect thereto has become effective or (b) if, after it has become effective, such registration is interfered with by any stop order, injunction or other order or requirement of the Commission or other governmental agency or court of competent jurisdiction for any reason, other than by reason of some act or omission by the Holder. The Company shall use its commercially reasonable efforts to cause any registration statement filed pursuant to the demand rights granted under this Section 5 to remain effective for a period of at least nine (9) consecutive months.

Section 6. Piggy-Back Registrations. If, at any time while this Warrant is outstanding, there is not an effective registration statement covering all of the Warrant Shares and the Company shall determine to prepare and file with the Commission a registration statement relating to an offering for its own account or the account of others under the Securities Act of any of its equity securities, other than on Form S-4 or Form S-8 (each as promulgated under the Securities Act) or their then-equivalents relating to equity securities to be issued solely in connection with any acquisition of any entity or business or equity securities issuable in connection with the Company’s stock option or other employee benefit plans or agreements, then the Company shall deliver to each Holder a written notice of such determination and, if within 15 days after the date of the delivery of such notice, any such Holder shall so request in writing, the Company shall include in such registration statement all or any part of such Warrant Shares such Holder requests to be registered; provided, however, that the Company shall not be required to register any Warrant Shares pursuant to this Section 6 that are eligible for resale pursuant to Rule 144 (without volume restrictions or current public information requirements) or that are the subject of a then-effective registration statement that is available for resales or other dispositions by such Holder; provided further, that, notwithstanding the other terms of this Warrant or any agreement between the Company and Holder, the Holder agrees that, as required by FINRA Rule 5110(g), the Holder shall not have the right to piggyback registration with respect to this Warrant or the Warrant Shares more than seven (7) years from the commencement of sales of the offering contemplated by the Underwriting Agreement.

Section 7. Miscellaneous.

(a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a “cashless exercise” pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

(b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

(c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

(d) Authorized Shares. The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

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 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 (i) 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, (ii) 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 (iii) 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.

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.

(e) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Underwriting Agreement.

(f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

(g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant or the Underwriting Agreement, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

(h) Notices. Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered to the address of the Holder in the Warrant Register.

(i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

(j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

(k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

(l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

(m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

(n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

* * * * *

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

VOLITIONRX LIMITED

By: _____
Name:
Title:

NOTICE OF EXERCISE

To: **VOLITIONRX LIMITED**

- (1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.
- (2) Payment shall take the form of (check applicable box):
- in lawful money of the United States; or
 - if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).
- (3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account

- (4) Accredited Investor. The undersigned is an “accredited investor” as defined in Regulation D promulgated under the Securities Act of 1933, as amended.

[SIGNATURE OF HOLDER]

Name of Investing Entity: _____

Signature of Authorized Signatory of Investing Entity: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

ASSIGNMENT FORM

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

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

Name:

Address:

Phone Number:

Email Address:

Dated:

Holder's Signature:

Holder's Address:



Stradling Yocca Carlson & Rauth
 A Professional Corporation
 660 Newport Center Drive, Suite 1600
 Newport Beach, CA 92660-6422
 949 725 4000
 stradlinglaw.com

June 2, 2023

VolitionRx Limited
 1489 West Warm Springs Road, Suite 110
 Henderson, Nevada 89014

Re: Shares of Common Stock of VolitionRx Limited

Ladies and Gentlemen:

We have acted as counsel for VolitionRx Limited, a Delaware corporation (the “*Company*”), in connection with the offering by the Company of up to 14,950,000 shares of the Company’s common stock, par value \$0.001 (the “*Shares*”), including up to 1,950,000 Shares that may be sold pursuant to the exercise of an option to purchase additional shares, warrants that will be issued by the Company to the underwriters of the offering (the “*Representative’s Warrants*”) to purchase up to 448,500 shares of the Company’s common stock, representing 3.0% of the Shares, and up to 448,500 shares of the Company’s common stock issuable upon the exercise of the Representative’s Warrants (the “*Representative’s Warrant Shares*,” and, collectively with the Shares and the Representative’s Warrants, the “*Securities*”), pursuant to a registration statement on Form S-3 (Registration Statement No. 333-259783) (the “*Registration Statement*”), filed with the Securities and Exchange Commission (the “*Commission*”) under the Securities Act of 1933, as amended (the “*Securities Act*”), the prospectus dated September 24, 2021, as amended on November 4, 2021 and as declared effective by the Commission on November 8, 2021 (the “*Base Prospectus*”), and the prospectus supplement dated June 1, 2023, filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations of the Securities Act (the “*Prospectus Supplement*”). The Base Prospectus and the Prospectus Supplement are collectively referred to as the “*Prospectus*.” All of the Securities are to be sold by the Company in the manner described in the Registration Statement and the Prospectus. This opinion is being furnished in accordance with the requirements of Item 601(b)(5)(i) of Regulation S-K.

In connection with the preparation of this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of: (a) the corporate and organizational documents of the Company, including the Certificate of Incorporation, as amended through the date hereof, and the Bylaws of the Company, as amended through the date hereof, (b) the resolutions (the “*Resolutions*”) of the Board of Directors of the Company and a committee thereof with respect to the issuance and sale of the Securities, (c) the Registration Statement and exhibits thereto, including the Prospectus comprising a part thereof, and (d) an executed copy of the Underwriting Agreement, dated as of June 1, 2023, by and between the Company and Prime Executions, Inc. dba Freedom Capital Markets, as representative of the several underwriters named therein including the exhibits thereto, (the “*Underwriting Agreement*”). In addition, we have examined originals or copies, certified or otherwise identified to our satisfaction, of certain other corporate records, documents, instruments and certificates of public officials and of the Company, and we have made such inquiries of officers of the Company and public officials and considered such questions of law as we have deemed necessary for purposes of rendering the opinions set forth herein.

We have assumed the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof and the genuineness of all signatures. In making our examination of documents executed by parties other than the Company, we have assumed that each other party has the power and authority to execute and deliver, and to perform and observe the provisions of, such documents and has duly authorized, executed and delivered such documents, and that such documents constitute the legal, valid and binding obligations of each such party. As to questions of fact material to our opinions, we have relied upon the certificates of certain officers of the Company.

With regard to our opinion concerning the Representative’s Warrants constituting valid and binding obligations of the Company:

- (i) Our opinion is subject to, and may be limited by, (a) applicable bankruptcy, reorganization, insolvency, moratorium, fraudulent conveyance, debtor and creditor, and similar laws which relate to or affect creditors’ rights generally, and (b) general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing) regardless of whether considered in a proceeding in equity or at law.
- (ii) Our opinion is subject to the qualification that the availability of specific performance, an injunction or other equitable remedies is subject to the discretion of the court before which the request is brought.
- (iii) We express no opinion as to any provision of the Representative’s Warrants that: (a) provides for liquidated damages, buy-in damages, monetary penalties, prepayment or make-whole payments or other economic remedies to the extent such provisions may constitute unlawful penalties, (b) relates to advance waivers of claims, defenses, rights granted by law, or notice, opportunity for hearing, evidentiary requirements, statutes of limitations, trial by jury, or procedural rights, (c) restricts non-written modifications and waivers, (d) provides for the payment of legal and other professional fees where such payment is contrary to law or public policy, (e) relates to exclusivity, election or accumulation of rights or remedies, or (f) provides that provisions of the Representative’s Warrants are severable to the extent an essential part of the agreed exchange is determined to be invalid and unenforceable.
- (iv) We express no opinion as to whether a state court outside of the State of New York or a federal court of the United States would give effect to the choice of New York law provided for in the Representative’s Warrants.

With respect to the Representative’s Warrant Shares, we express no opinion to the extent that, notwithstanding its current reservation of shares of the Company’s common stock, future issuances of securities, including the Representative’s Warrant Shares, of the Company and/or adjustments to outstanding securities, including the Representative’s Warrants, of the Company may cause the Representative’s Warrants to be exercisable for more shares of Common Stock than the number that remain authorized but unissued. Further, we have assumed the Exercise Price (as defined in the Representative’s Warrants) will not be adjusted to an amount below the par value per share of the common stock.

Based on the foregoing, and subject to the further limitations, qualifications and assumptions set forth herein we are of the opinion that (a) the Shares and Representative's Warrant Shares have been duly authorized and, upon issuance, delivery and payment therefor in the manner contemplated by the Resolutions, the Underwriting Agreement, the Registration Statement and the Prospectus, will be validly issued, fully paid and non-assessable, and (b) the Representative's Warrants, when issued in accordance with the Registration Statement and the Underwriting Agreement, will constitute valid and legally binding obligations of the Company.

We render this opinion only with respect to the General Corporation Law of the State of Delaware as in effect on the date hereof, and we express no opinion herein concerning the application or effect of the laws of any other jurisdiction. This opinion is limited to the matters stated herein, and no opinion is implied or may be inferred beyond the matters expressly stated herein.

We hereby consent to the use of this opinion as Exhibit 5.1 to the Company's Current Report on Form 8-K, and further consent to the reference to us under the heading "Legal Matters" in the Registration Statement and any amendments thereto. By giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act and the rules and regulations promulgated thereunder.

[Signature Page Follows]

This opinion is intended solely for use in connection with the issuance and sale of the Shares the Representative's Warrant Shares and the Representative's Warrants pursuant to the Registration Statement and is not to be relied upon for any other purpose or delivered to or relied upon by any other person without our prior written consent. This opinion is rendered as of the date hereof and based solely on our understanding of facts in existence as of such date after the examination described in this opinion. We assume no obligation to advise you of any fact, circumstance, event or change in the law or the facts that may hereafter be brought to our attention whether or not such occurrence would affect or modify the opinions expressed herein.

Very truly yours,

/s/ Stradling Yocca Carlson & Rauth, P.C.

STRADLING YOCCA CARLSON & RAUTH, P.C.

VolitionRx Limited Announces Proposed Underwritten Public Offering of Common Stock

HENDERSON, Nevada, May 31, 2023 /PRNewswire/ -- VolitionRx Limited (NYSE AMERICAN: VNRX) (“Volition” or the “Company”), a multi-national epigenetics company, announced today that it has commenced an underwritten public offering of shares of its common stock. In addition, Volition intends to grant the underwriters a 30-day option to purchase up to an additional 15% of the number of shares of common stock offered in the offering at the public offering price, less underwriting discounts and commissions. All of the shares of common stock in the offering are being offered by Volition. The final terms of the proposed offering will depend on market and other conditions, and there can be no assurance as to whether or when the offering may be completed, or as to the actual size or terms of the offering.

Volition intends to use the net proceeds from the offering for research and continued product development, clinical studies, product commercialization, working capital and other general corporate purposes, including potential strategic acquisitions.

Freedom Capital Markets is acting as the book-running manager of the offering and Bancroft Capital is acting as co-manager.

The securities are being offered by Volition pursuant to a “shelf” registration statement on Form S-3 (File No. 333-259783) previously filed with the Securities and Exchange Commission (the “SEC”) on September 24, 2021, as amended on November 4, 2021, and declared effective by the SEC on November 8, 2021. The offering is being made only by means of a prospectus supplement and an accompanying base prospectus, as may be further supplemented by any free writing prospectus and/or pricing supplement that the Company may file with the SEC. A preliminary prospectus supplement and an accompanying base prospectus describing the terms of the proposed offering have been filed with the SEC and are available on the SEC’s website at www.sec.gov. The final prospectus supplement relating to the offering will be filed with the SEC and will also be available on the SEC’s website. Copies of the preliminary prospectus supplement, the final prospectus supplement and the accompanying base prospectus relating to the offering can also be obtained, when available, in writing from Freedom Capital Markets, 40 Wall Street, 58th Floor, New York, NY 10005, or via email at EquitySyndicate@freedomcapmks.com and via telephone at (800) 786-1469.

This press release shall not constitute an offer to sell or the 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 Volition

Volition is a multi-national epigenetics company powered by Nu.Q[®], its proprietary nucleosome quantification platform. Through its subsidiaries, Volition is developing simple, easy to use, cost effective blood tests to help diagnose and monitor a range of life-altering diseases including certain cancers and diseases associated with NETosis such as sepsis and COVID-19. Early diagnosis and monitoring have the potential to not only prolong the life of patients but also improve their quality of life. The tests are based on the science of Nucleosomics[™], which is the practice of identifying and measuring nucleosomes in the bloodstream or other bodily fluid—since changes in these parameters are an indication that disease is present.

Volition's research, product development and manufacturing activities are centered in Belgium, with innovation and U.S. operations in California, and additional offices in Nevada, London and Singapore.

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Cautionary Note Regarding Forward-Looking Statements

Statements in this press release may be “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that concern matters that involve risks and uncertainties that could cause actual results to differ materially from those anticipated or projected in the forward-looking statements. These forward-looking statements reflect the current beliefs and expectations of management and include statements regarding the timing of the offering, the expected use of proceeds from the offering, the grant to the underwriters of an option to purchase additional shares of common stock, and Volition's ability to complete the offering. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. Although Volition believes that the expectations reflected in such forward-looking statements are reasonable, it can give no assurance that such expectations will prove to be correct. Forward-looking statements are subject to risks and uncertainties that may cause Volition's actual activities or results to differ materially from those indicated or implied by any forward-looking statement, including, without limitation, due to risks and uncertainties related to market conditions and the satisfaction of closing conditions related to the proposed public offering, risks disclosed in the section titled “*Risk Factors*” included in the preliminary prospectus supplement filed with the SEC on May 31, 2023, and risks disclosed in other documents Volition files from time to time with the SEC, including Volition's Quarterly Reports on Form 10-Q and Annual Reports on Form 10-K. Forward-looking statements are made as of the date of this release, and, except as required by law, Volition does not undertake an obligation to update its forward-looking statements to reflect future events or circumstances.

Nucleosomics[™] and Nu.Q[®] and their respective logos are trademarks and/or service marks of VolitionRx Limited and its subsidiaries.

VolitionRx Limited Announces Pricing of \$16.5 Million Underwritten Public Offering of Common Stock

HENDERSON, Nevada, June 1, 2023 /PRNewswire/ -- VolitionRx Limited (NYSE AMERICAN: VNRX) (“Volition” or the “Company”), a multi-national epigenetics company, announced today the pricing of an underwritten public offering of 13,000,000 shares of its common stock at a public offering price of \$1.27 per share. The gross proceeds to Volition from the offering, before deducting underwriting commissions and other estimated offering expenses payable by Volition, are expected to be \$16.5 million. In addition, Volition has granted the underwriters a 30-day option to purchase up to an additional 1,950,000 shares of its common stock at the public offering price, less underwriting discounts and commissions, to cover over-allotments in connection with the offering. All of the shares of common stock in the offering were offered by Volition. The offering is expected to close on or about June 5, 2023, subject to the satisfaction of customary closing conditions.

Volition intends to use the net proceeds from the offering for research and continued product development, clinical studies, product commercialization, working capital and other general corporate purposes, including potential strategic acquisitions.

Freedom Capital Markets is acting as the book-running manager of the offering and Bancroft Capital is acting as co-manager.

The securities are being offered by Volition pursuant to a “shelf” registration statement on Form S-3 (File No. 333-259783) previously filed with the Securities and Exchange Commission (the “SEC”) on September 24, 2021, as amended on November 4, 2021, and declared effective by the SEC on November 8, 2021. The offering is being made only by means of a prospectus supplement and an accompanying base prospectus, as may be further supplemented by any free writing prospectus and/or pricing supplement that the Company may file with the SEC. A preliminary prospectus supplement and an accompanying base prospectus describing the terms of the proposed offering have been filed with the SEC and are available on the SEC’s website at www.sec.gov. The final prospectus supplement relating to the offering will be filed with the SEC and will also be available on the SEC’s website at www.sec.gov. Copies of the preliminary prospectus supplement, the final prospectus supplement and the accompanying base prospectus relating to the offering can also be obtained, when available, in writing from Freedom Capital Markets, 40 Wall Street, 58th Floor, New York, NY 10005, or via email at EquitySyndicate@freedomcapmkts.com and via telephone at (800) 786-1469.

This press release shall not constitute an offer to sell or the 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.

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Volition's research, product development and manufacturing activities are centered in Belgium, with innovation and U.S. operations in California, and additional offices in Nevada, London and Singapore.

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