

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

Amendment No. 3 to  
FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

**VOLITIONRX LIMITED**

(Exact name of registrant as specified in its charter)

<b>Delaware</b>	<b>2835</b>	<b>91-1949078</b>
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

**1 Scotts Road  
#24-05 Shaw Centre  
Singapore 228208  
Telephone: +1 (646) 650-1351  
Facsimile: +32 8172 5651**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Agents and Corporations, Inc.  
1201 Orange Street, Suite 600  
Wilmington, DE 19899**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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**As soon as practicable after this Registration Statement becomes effective.**

(Approximate date of commencement of proposed sale to the public)

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input checked="" type="checkbox"/>

**The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to such Section 8(a), may determine.**

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### **Explanatory Note**

This Amendment No. 3 to Registration Statement on Form S-1 (File No. 333-200628) (Registration Statement) of VolitionRx Limited (Registrant) is being filed solely to include Exhibits 1.01 and 5.1 to the Registration Statement and to amend the disclosures in Item 16 of Part II of the Registration Statement. No changes or additions are being made hereby to the Prospectus constituting Part I of the Registration Statement (not included herein) or to Items 13, 14, 15 or 17 of Part II of the Registration Statement.

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## PART II

### INFORMATION NOT REQUIRED IN PROSPECTUS

#### Item 13. Other expenses of issuance and distribution

The following is a list of estimated expenses in connection with the issuance and distribution of the securities being registered, with the exception of underwriting discounts and commissions:

SEC registration fee	\$	1,336
Legal fees and expenses	\$	200,000
Transfer Agent and Registrar Fees and Expenses	\$	5,000
Accounting fees and expenses	\$	10,000
Miscellaneous	\$	-
Total	\$	<u>216,336</u>

All of the above expenses except the SEC registration fee are estimates. All of the above expenses will be borne by the registrant.

#### Item 14. Indemnification of directors and officers

##### *Indemnification Provisions of the Company's Certificate of Incorporation*

- A. The Company shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action, suit or proceeding, whether civil, criminal, administrative, or investigative (other than an action by or in the right of the Company) by reason of the fact that he is or was a director, officer, employee, or agent of the Company, or is or was serving at the request of the Company as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, against expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit, or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit, or proceeding by judgment, order, settlement, conviction, or upon a plea of no contest or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Company, and with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful.
- B. The Company shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action or suit by or in the right of the Company to procure a judgment in its favor by reason of the fact that he is or was a director, officer, employee, or agent of the Company, or is or was serving at the request of the Company as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Company and except that no indemnification shall be made in respect of any claim, issue, or matter as to which such person shall have been adjudged to be liable for negligence or misconduct in the performance of his duty to the Company unless and only to the extent that the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper.
- C. To the extent that a director, officer, employee, or agent of the Company has been successful on the merits or otherwise in defense of any action, suit, or proceeding referred to in paragraphs A and B, above, or in defense of any claim, issue, or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith.

- D. Any indemnification under paragraphs A and B, above, (unless ordered by a court) shall be made by the Company only as authorized in the specific case upon a determination that indemnification of the director, officer, employee, or agent is proper in the circumstances because he has met the applicable standard of conduct set forth in paragraphs A and B, above. Such determination shall be made (1) by the Board of Directors by a majority vote of a quorum consisting of directors who were not parties to such action, suit, or proceeding, or (2) if such a quorum is not obtainable, or, even if obtainable a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, or (3) by the stockholders.
- E. Expenses incurred in defending a civil or criminal action, suit, or proceeding may be paid by the Company in advance of the final disposition of such action, suit, or proceeding as authorized by the Board of Directors in the specific case upon receipt of an undertaking by or on behalf of the director, officer, employee, or agent to repay such amount unless it shall ultimately be determined that he is entitled to be indemnified by the Company as authorized herein.

#### ***Delaware Law on Indemnification***

Delaware General Corporation Law provides, in general, that a corporation incorporated under the laws of the State of Delaware, such as the Company, may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than a derivative action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. In the case of a derivative action, a Delaware corporation may indemnify any such person against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification will be made in respect of any claim, issue or matter as to which such person will have been adjudged to be liable to the corporation unless and only to the extent that the State of Delaware or any other court in which such action was brought determines such person is fairly and reasonably entitled to indemnity for such expenses.

Regarding indemnification for liabilities arising under the Securities Act of 1933 which may be permitted for directors or officers pursuant to the foregoing provisions, we are informed that, in the opinion of the Securities and Exchange Commission, such indemnification is against public policy, as expressed in the Act and is therefore unenforceable.

#### **Item 15. Recent sales of unregistered securities**

During the past three years, the registrant has issued and/or sold the following securities in various transactions exempt from registration:

##### Issuances of Capital Stock:

- On December 6, 2011, the Company issued 525,000 shares under the terms of its purchase agreement with Valirx Plc as modified, to settle debts of \$1,110,000 related to the acquisition of Belgian Volition SA and certain patents.†
- On or about May 25, 2012, the Company issued an aggregate of 688,101 restricted shares of the Company's common stock to four (4) U.S. accredited investors and twenty nine (29) non-U.S. investors at a per share price of \$1.75 for aggregate proceeds to the Company of \$1,019,375. Additionally, each subscriber received a four-year common stock purchase warrant to purchase one share at a price of \$2.60 for every two shares subscribed for under the private placement. In addition, as part of the same placement, directors, employees and consultants have converted \$184,777 debt due for services on the same terms as the cash subscriptions above, for 105,591 shares of common stock at a price of \$1.75 per share, and 52,798 warrants exercisable at a price of \$2.60 per share and expiring May 10, 2016.\*†

- On or about July 31, 2012, the Company issued an aggregate of 545,434 restricted shares of the Company's common stock to one (1) U.S. Accredited Investor and thirteen (13) Non-U.S. Investors at a per share price of \$1.75 for aggregate proceeds to the Company of \$932,250. In addition, as part of the same placement, directors converted \$22,250 debt due for services on the same terms as the cash subscriptions above, for 12,715 shares of common stock at a price of \$1.75 per share.\*†
- On or about October 31, 2012, the Company issued an aggregate of 245,375 restricted shares of the Company's common stock to six (6) Non-U.S. Investors at a per share price of \$2.00 for aggregate proceeds to the Company of \$490,750.†
- On or about December 28, 2012, the Company issued an aggregate of 67,000 restricted shares of the Company's common stock to nine (9) Non-U.S. Investors at a per share price of \$2.00 for aggregate proceeds to the Company of \$134,000.†
- On or about March 25, 2013, the Company issued an aggregate of 244,792 restricted shares of the Company's common stock to one (1) U.S. Accredited Investor and eighteen (18) Non-U.S. Investors at a per share price of \$2.00 for aggregate proceeds to the Company of \$471,000. In addition, as part of the same placement, certain directors and consultants have converted \$18,583 debt due for services on the same terms as the cash subscriptions above, for 9,292 shares of common stock at a price of \$2.00 per share.\*†
- On or about May 1, 2013, the Company issued an aggregate of 208,000 restricted shares of the Company's common stock to one (1) U.S. Accredited Investor and seven (7) Non-U.S. Investors at a per share price of \$2.00 for aggregate proceeds to the Company of \$416,000.\*†
- On or about June 10, 2013, the Company issued an aggregate of 297,500 restricted shares of the Company's common stock to twenty-seven (27) U.S. Accredited Investors at a per share price of \$2.00 for aggregate proceeds to the Company of \$595,000.
- On or about August 7, 2013, the Company issued an aggregate of 225,000 restricted shares of the Company's common stock to four (4) Non-U.S. Investors at a per share price of \$2.00 for aggregate proceeds to the Company of \$450,000. Attached to share issuances were 45,000 warrants. Each warrant is immediately exercisable for a period of three years at \$2.40 per share.†
- On or about August 16, 2013, the Company issued an aggregate of 12,448 restricted shares of the Company's common stock to one (1) U.S. Accredited Investor and three (3) Non-U.S. Investors, pursuant to the terms of certain consultancy agreements. Under the consultancy agreements, the Company issued an aggregate of 12,448 shares of common stock at fair market value of \$2.25 as stated on date of issuance for a total value of \$28,000.\*†
- On or about August 30, 2013, the Company issued an aggregate of 15,000 restricted shares of the Company's common stock to one (1) U.S. Accredited Investor, pursuant to the terms of a consultancy agreement. Under the consultancy agreement, the Company issued an aggregate of 15,000 shares of common stock at fair market value of \$2.05 as stated on date of issuance for a total value of \$30,750.\*
- On or about November 25, 2013, the Company sold 437,320 Units to four (4) non-U.S. investors and one (1) U.S. accredited investor at a price of \$2.05 per Unit, for an aggregate amount of \$896,500 with a Unit entitling the holder to one restricted share of common stock of the Company and one warrant to purchase one share of common stock at \$2.40 per share, valid for five years. As part of the same private placement, directors, employees and consultants converted \$38,423.15 debt due for services on the same terms as the cash subscriptions for 18,743 Units at a price of \$2.05 per Unit. Each Unit entitles the holder to one share of common stock of the Company and one warrant to purchase one share of common stock at \$2.40 per share, valid for five years.\*†
- On or about December 31, 2013, the Company sold 29,392 Units to three (3) non-U.S. investors at a price of \$2.05 per Unit, for an aggregate amount of \$60,250 with a Unit entitling the holder to one share of common stock of the Company and one warrant to purchase one share of common stock at \$2.40 per share, valid for five years.†

- On or about February 26, 2014, the Company issued an aggregate of 1,500,000 restricted shares of the Company's common stock to twenty-four (24) non-U.S. investors and twenty four (24) Accredited Investors at a per share price of \$2.00 for aggregate proceeds to the Company of \$3,000,000. Additionally, each subscriber received a five-year common stock purchase warrant to purchase one share at a price of \$2.20 for every share subscribed for under the private placement.\*†
- On or about February 26, 2014, the Company issued 16,667 shares of common stock to one (1) non-U.S. investor at a price of \$2.10 per share to settle \$35,000 debts for services.†
- On or about March 25, 2014, the Company issued 12,334 shares of common stock to one (1) non-U.S. investor at a price of \$2.10 per share to settle \$25,900 debts for services.†
- On or about March 26, 2014, the Company issued 99,178 shares of common stock to twenty-seven (27) U.S. accredited investors under the terms of the Private Placement Memorandum relating to the prior issue of 297,500 shares of common stock on June 10, 2013, for no additional consideration.\*
- On or about June 5, 2014, the Company issued 160,228 shares of common stock to four (4) non-U.S. investors at a price of \$2.20 per share, for an aggregate amount of \$352,500.†
- On or about September 24, 2014, the Company issued 540,796 restricted shares of the Company's common stock to seven (7) Accredited Investors and ten (10) Non-U.S. Investors, at a per share price of \$2.20 for aggregate proceeds to the Company of \$1,083,095. In addition, as part of the same placement, certain directors and consultants have converted \$106,654 debt due for services on the same terms as the cash subscriptions above, for 48,480 shares of common stock at a price of \$2.20 per share.\*†
- On or about September 26, 2014, the Company issued 300,000 restricted shares of the Company's common stock to twenty three (23) Accredited Investors at a price of \$2.50 per share, for an aggregate amount of \$750,000.\*
- On or about October 09, 2014, the Company issued 91,757 restricted shares of the Company's common stock to ten (10) Accredited Investors and seven (7) Non-U.S. Investors at a price of \$2.50 per share, for an aggregate amount of \$229,392.\*†
- On or about November 17, 2014, the Company issued 237,500 restricted shares of the Company's common stock to fifteen (15) Accredited Investors at a price of \$3.00 per share, for an aggregate amount of \$712,004.\*
- On or about November 21, 2014, the Company issued 3,115 restricted shares of the Company's common stock to six (6) Accredited Investors and six (6) Non-U.S. Investors at a price of \$3.00 per share, for an aggregate amount of \$9,345.\*†

#### Grants of Stock Options:

- On November 25, 2011, certain officers and directors of the Company were granted options to purchase an aggregate of 720,000 shares of common stock of the Company under the 2011 Equity Incentive Plan dated November 17, 2011. The exercise prices are \$3 for options vesting in the first year, \$4 for options vesting in the second year, and \$5 for options vesting in the third year.\*†
- On September 1, 2012, an employee of the Company was granted an option to purchase an aggregate of 30,000 shares of common stock of the Company under the 2011 Equity Incentive Plan dated November 17, 2011. The exercise prices are \$4.31 for options vesting in the first year, \$5.31 for options vesting in the second year, and \$6.31 for options vesting in the third year.†
- On December 13, 2012, certain officers and directors of the Company were granted options to purchase an aggregate of 100,000 shares at an exercise price of \$3.01 of common stock of the Company under the 2011 Equity Incentive Plan dated November 17, 2011.†

- On March 20, 2013, certain employees of the Company were granted an option to purchase an aggregate of 37,000 shares of common stock of the Company under the 2011 Equity Incentive Plan dated November 17, 2011. The exercise prices are \$2.35 for options vesting in the first year, \$3.35 for options vesting in the second year, and \$4.35 for options vesting in the third year.†
- On May 16, 2014, a certain consultant of the Company was granted an option to purchase an aggregate of 25,000 shares of common stock of the Company under the 2011 Equity Incentive Plan dated November 17, 2011. The exercise prices are \$3 for options vesting in the first year, \$4 for options vesting in the second year, and \$5 for options vesting in the third year.\*
- On September 02, 2013, certain employees of the Company were granted an option to purchase an aggregate of 16,300 shares of common stock of the Company under the 2011 Equity Incentive Plan dated November 17, 2011. The exercise prices are \$2.35 for options vesting in the first year, \$3.35 for options vesting in the second year, and \$4.35 for options vesting in the third year.†
- On August 18, 2014, certain officers, directors, employees and consultants of the Company were granted options to purchase an aggregate of 670,000 shares of common stock of the Company under the 2011 Equity Incentive Plan dated November 17, 2011. The exercise prices are \$2.50 for options vesting at six (6) months, and, \$3 for options vesting at eighteen (18) months. †\*#
- On August 18, 2014, a certain officer of the Company was granted an option to purchase an aggregate of 60,000 shares of common stock of the Company under the 2011 Equity Incentive Plan dated November 17, 2011. The exercise prices are \$3 for options vesting in the first year, \$4 for options vesting in the second year, and \$5 for options vesting in the third year.†#

#### Issuances of Warrants:

- During the year ended December 31, 2011, the Company issued 300,000 warrants attached to the issuance of 370,000 shares. The Company has allocated \$73,791 of the total \$150,000 in proceeds to the value of the warrants. The warrants are exercisable immediately for five years at an exercise price of \$0.50, and do not contain any anti-dilution provisions.\*†
- During the year ended December 31, 2011, the Company also issued 450,000 warrants valued at \$390,530 to officers and directors of the Company for services rendered to the Company. The warrants are exercisable immediately for five years at exercise prices of \$0.50 and \$1.05.†
- On or about May 25, 2012, the Company issued 26,685 warrants exercisable at a price of \$1.75 per share and expiring May 10, 2015.\*
- On or about March 20, 2013, the Company issued 200,000 warrants to a consultant for services at an exercise price of \$2.47, expiring three years after vesting. 25,000 warrants vest immediately, and the vesting of the remaining 175,000 warrants is contingent upon the achievement of specific milestones.\*
- On or about June 10, 2013, the Company issued 29,750 warrants exercisable for a period of five years at a price of \$2.00 per share and expiring May 10, 2015.\*
- On December 31, 2013, the Company issued 35,000 warrants to a consultant for services at an exercise price of \$2.40.†
- On January 28, 2014, the Company issued 10,000 warrants to a consultant for services at an exercise price of \$2.40, exercisable immediately for three years.\*
- On or about February 26, 2014, the Company issued 30,975 warrants immediately exercisable for a period of five years at a price of \$2.20 per share pursuant to placement agent agreements dated November 19, 2013 and February 10, 2014.\*†
- On September 05, 2014, the Company issued 10,000 warrants to a consultant for services at an exercise price of \$2.40, exercisable immediately for three years. †



- On or about September 26, 2014, the Company issued 24,000 warrants exercisable at a price of \$3.00 per share and expiring September 26, 2017 pursuant to a placement agent agreement dated September 22, 2014.\*
- On or about November 17, 2014, the Company issued 19,000 warrants exercisable at a price of \$3.75 per share and expiring November 17, 2017 pursuant to a placement agent agreement dated November 12, 2014.\*

All securities sold contained a restrictive legend on the share certificate stating that the securities have not been registered under the Act and setting forth or referring to the restrictions on transferability and sale of the securities.

No underwriters were used in connection with any of the foregoing transactions. These issuances were deemed to be exempt from registration under the Securities Act in reliance on (i) Section 4(2) of the Securities Act, including in some cases, Regulation D and Rule 506 promulgated thereunder (as noted by \*), and (ii) Rule 903 of Regulation S of the Securities Act, as transactions by an issuer not involving a public offering or sales completed in an “offshore transaction” as defined in Rule 902(h) of Regulation S, as we did not engage in any directed selling efforts in the United States in connection with the sale of the shares and each investor represented to us that the investor was not a “U.S. person” as defined in Regulation S (as noted by †). The purchasers of securities in each such transaction represented their intention to acquire the securities for investment only and not with a view to offer or sell, in connection with any distribution of the securities, and appropriate legends were affixed to the share certificates and instruments issued in such transactions.

## Item 16. Exhibits

### (a) Exhibits

<b>Exhibit Number</b>	<b>Description</b>	<b>Filing</b>
1.01	Form of Underwriting Agreement	Filed herewith.
2.01	Share Purchase Agreement by and between Singapore Volition and Valirx PLC dated September 22, 2010	Filed with the SEC on May 8, 2012 as part of our Amended Current Report on Form 8-K/A.
2.02	Supplementary Agreement to the Share Purchase Agreement by and between Singapore Volition and Valirx PLC dated June 9, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
3.01	Amended and Restated Certificate of Incorporation	Filed with the SEC on October 7, 2013 as part of our Current Report on Form 8-K.
3.01(a)	Amendment to Certificate of Incorporation	Filed with the SEC on November 10, 2005 as part of our Registration Statement on Form SB-2.
3.01(b)	Certificate for Renewal and Revival of Charter	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
3.02	Bylaws	Filed with the SEC on December 6, 1999 as part of our Registration Statement on Form 10-SB.
4.01	2011 Equity Incentive Plan dated November 17, 2011	Filed with the SEC on November 18, 2011 as part of our Current Report on Form 8-K.
4.02	Sample Stock Option Agreement	Filed with the SEC on November 18, 2011 as part of our Current Report on Form 8-K.
4.03	Sample Stock Award Agreement for Restricted Stock	Filed with the SEC on November 18, 2011 as part of our Current Report on Form 8-K.
5.1	Opinion of Stradling Yocca Carlson & Rauth, P.C.	Filed herewith.
10.01	Patent License Agreement by and between Cronos Therapeutics Limited and Imperial College Innovations Limited dated October 19, 2005	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.02	Patent License Agreement by and between Valirx PLC and Chroma Therapeutics Limited dated October 3, 2007	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.03	Contract Repayable Grant Advance on the Diagnosis of Colorectal Cancer by "Nucleosomics <sup>TM</sup> " by and between ValiBio SA and The Walloon Region dated December 17, 2009	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.04	Non-Exploitation and Third Party Patent License Agreement by and among ValiBio SA, Valirx PLC and The Walloon Region dated December 17, 2009	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.05#	Agreement by and between Singapore Volition and PB Commodities Pte Limited dated August 6, 2010	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.06#	Employment Agreement by and between PB Commodities Pte Ltd and Cameron Reynolds dated September 4, 2010	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.07	Deed of Novation by and among Singapore Volition Pte Limited, Valirx PLC, ValiBio SA and Chroma Therapeutics Limited dated September 22, 2010	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.08	Letter of Appointment as Non Executive Director by and between Singapore Volition Pte Limited and Satu Vainikka dated September 22, 2010	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.09	Letter of Appointment as Non-Executive Director by and between Singapore Volition Pte Limited and Guy Archibald Innes dated September 23, 2010	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.

10.10#	Master Consultancy Services Agreement by and between Singapore Volition Pte Limited and OncoLytika Ltd dated October 1, 2010	Filed with the SEC on April 1, 2013 as part of our Annual Report on Form 10-K for the fiscal year ended December 31, 2012.
10.11	Patent License Agreement by and between Singapore Volition and Belgian Volition dated November 2, 2010	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.12	Letter of Appointment as Non-Executive Director by and between Singapore Volition Pte Limited and Dr. Alan Colman dated May 25, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.13	License Agreement by and between Singapore Volition and the European Molecular Biology Laboratory dated June 6, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.14	Deed of Novation by and among Imperial College Innovations Limited, Valipharma Limited and HyperGenomics Pte Limited dated June 9, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.15	Patent License Agreement by and between HyperGenomics Pte Limited and Valipharma Limited dated June 9, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.16	Consultancy Agreement by and between Singapore Volition Pte Limited and Malcolm Lewin dated July 10, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.17	Letter of Appointment as Executive Chairman by and between Singapore Volition and Dr. Martin Faulkes dated July 13, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.18	Share Exchange Agreement by and between the Company and Singapore Volition Pte Limited dated September 26, 2011	Filed with the SEC on September 29, 2011 as part of our Current Report on Form 8-K.
10.19	Agreement, Consent and Waiver by and between Standard Capital Corporation and its Shareholders dated September 27, 2011	Filed with the SEC on April 5, 2012 as part of our Amended Current Report on Form 8-K/A.
10.20	Agreement by and between HyperGenomics Pte Limited and PB Commodities Pte Ltd dated October 1, 2011	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.21	Agreement by and between Belgian Volition SA and the Biobank of CHU UCL Mont-Godinne dated August 6, 2012	Filed with the SEC on October 4, 2012 as part of our Amended Registration Statement on Form S-1/A.
10.22	Common Stock Purchase Agreement by and among Volitionrx Limited and the purchasers thereto dated February 26, 2014	Filed with the SEC on February 28, 2014 as part of our Current Report on Form 8-K.
10.23	Service Agreement by and between Singapore Volition and Volition Research Limited dated August 10, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.24	Settlement Agreement by and between Singapore Volition and Volition Research Limited dated August 11, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.25#	Consultancy Agreement by and between PB Commodities Pte Ltd and Cameron Reynolds effective as of January 1, 2015	Previously filed.
10.26#	Executive Employment Agreement by and between VolitionRx and Cameron Reynolds effective as of January 1, 2015	Previously filed.
10.27#	Consultancy Agreement by and between VolitionRx and Borlaug Limited dated as of January 1, 2015	Previously filed.

10.28#	Employment Agreement by and between VolitionRx and Rodney Rootsart effective as of January 1, 2015	Previously filed.
10.29#	Master Consultancy Services Agreement by and between Belgian Volition and OncoLytika Ltd. dated January 1, 2014	Previously filed.
10.30#	Agreement by and between VolitionRx and Isosceles Finance Limited dated May 2, 2014	Previously filed.
10.31#	Letter of Appointment as Non-Executive Director by and between VolitionRx and Dr. Habib Skaff dated May 28, 2014	Previously filed.
14.1	Code of Ethics	Filed with the SEC on November 10, 2005 as part of our Registration Statement on Form SB-2.
21.1	List of Subsidiaries	Filed with the SEC on October 13, 2011 as part of our Current Report on Form 8-K.
23.1	Auditor Consent	Previously filed.
23.2	Consent of Stradling Yocca Carlson & Rauth, P.C. (included in Exhibit 5.1)	Filed herewith.
24.1	Powers of Attorney (included on signature page to this Registration Statement)	Previously filed.
101.INS	XBRL Instance Document	Previously filed.
101.SCH	XBRL Taxonomy Extension Schema Document	Previously filed.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	Previously filed.
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document	Previously filed.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	Previously filed.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	Previously filed.

# Management contract or compensatory plan.

- (a) Financial Statement Schedules - schedules have been omitted because they are not required, they are not applicable or the information is already included in the financial statements or notes thereto.

## Item 17. Undertakings

The undersigned registrant hereby undertakes:

1. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
  - i. To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
  - ii. To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
  - iii. To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;
2. That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of this offering.
4. That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
  - i. Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
  - ii. Each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
5. That for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
  - i. Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
  - ii. Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - iii. The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
  - iv. Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
6. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.
7. The undersigned registrant hereby undertakes that:
  - i. For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and
  - ii. For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.



## EXHIBIT INDEX

Exhibit Number	Description	Filing
1.01	Form of Underwriting Agreement	Filed herewith.
2.01	Share Purchase Agreement by and between Singapore Volition and Valirx PLC dated September 22, 2010	Filed with the SEC on May 8, 2012 as part of our Amended Current Report on Form 8-K/A.
2.02	Supplementary Agreement to the Share Purchase Agreement by and between Singapore Volition and Valirx PLC dated June 9, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
3.01	Amended and Restated Certificate of Incorporation	Filed with the SEC on October 7, 2013 as part of our Current Report on Form 8-K.
3.01(a)	Amendment to Certificate of Incorporation	Filed with the SEC on November 10, 2005 as part of our Registration Statement on Form SB-2.
3.01(b)	Certificate for Renewal and Revival of Charter	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
3.02	Bylaws	Filed with the SEC on December 6, 1999 as part of our Registration Statement on Form 10-SB.
4.01	2011 Equity Incentive Plan dated November 17, 2011	Filed with the SEC on November 18, 2011 as part of our Current Report on Form 8-K.
4.02	Sample Stock Option Agreement	Filed with the SEC on November 18, 2011 as part of our Current Report on Form 8-K.
4.03	Sample Stock Award Agreement for Restricted Stock	Filed with the SEC on November 18, 2011 as part of our Current Report on Form 8-K.
5.1	Opinion of Stradling Yocca Carlson & Rauth, P.C.	Filed herewith.
10.01	Patent License Agreement by and between Cronos Therapeutics Limited and Imperial College Innovations Limited dated October 19, 2005	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.02	Patent License Agreement by and between Valirx PLC and Chroma Therapeutics Limited dated October 3, 2007	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.03	Contract Repayable Grant Advance on the Diagnosis of Colorectal Cancer by "Nucleosomics <sup>TM</sup> " by and between ValiBio SA and The Walloon Region dated December 17, 2009	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.04	Non-Exploitation and Third Party Patent License Agreement by and among ValiBio SA, Valirx PLC and The Walloon Region dated December 17, 2009	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.05#	Agreement by and between Singapore Volition and PB Commodities Pte Limited dated August 6, 2010	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.06#	Employment Agreement by and between PB Commodities Pte Ltd and Cameron Reynolds dated September 4, 2010	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.07	Deed of Novation by and among Singapore Volition Pte Limited, Valirx PLC, ValiBio SA and Chroma Therapeutics Limited dated September 22, 2010	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.08	Letter of Appointment as Non Executive Director by and between Singapore Volition Pte Limited and Satu Vainikka dated September 22, 2010	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.09	Letter of Appointment as Non-Executive Director by and between Singapore Volition Pte Limited and Guy Archibald Innes dated September 23, 2010	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.

10.10#	Master Consultancy Services Agreement by and between Singapore Volition Pte Limited and OncoLytika Ltd dated October 1, 2010	Filed with the SEC on April 1, 2013 as part of our Annual Report on Form 10-K for the fiscal year ended December 31, 2012.
10.11	Patent License Agreement by and between Singapore Volition and Belgian Volition dated November 2, 2010	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.12	Letter of Appointment as Non-Executive Director by and between Singapore Volition Pte Limited and Dr. Alan Colman dated May 25, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.13	License Agreement by and between Singapore Volition and the European Molecular Biology Laboratory dated June 6, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.14	Deed of Novation by and among Imperial College Innovations Limited, Valipharma Limited and HyperGenomics Pte Limited dated June 9, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.15	Patent License Agreement by and between HyperGenomics Pte Limited and Valipharma Limited dated June 9, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.16	Consultancy Agreement by and between Singapore Volition Pte Limited and Malcolm Lewin dated July 10, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.17	Letter of Appointment as Executive Chairman by and between Singapore Volition and Dr. Martin Faulkes dated July 13, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.18	Share Exchange Agreement by and between the Company and Singapore Volition Pte Limited dated September 26, 2011	Filed with the SEC on September 29, 2011 as part of our Current Report on Form 8-K.
10.19	Agreement, Consent and Waiver by and between Standard Capital Corporation and its Shareholders dated September 27, 2011	Filed with the SEC on April 5, 2012 as part of our Amended Current Report on Form 8-K/A.
10.20	Agreement by and between HyperGenomics Pte Limited and PB Commodities Pte Ltd dated October 1, 2011	Filed with the SEC on February 24, 2012 as part of our Amended Current Report on Form 8-K/A.
10.21	Agreement by and between Belgian Volition SA and the Biobank of CHU UCL Mont-Godinne dated August 6, 2012	Filed with the SEC on October 4, 2012 as part of our Amended Registration Statement on Form S-1/A.
10.22	Common Stock Purchase Agreement by and among Volitionrx Limited and the purchasers thereto dated February 26, 2014	Filed with the SEC on February 28, 2014 as part of our Current Report on Form 8-K.
10.23	Service Agreement by and between Singapore Volition and Volition Research Limited dated August 10, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
10.24	Settlement Agreement by and between Singapore Volition and Volition Research Limited dated August 11, 2011	Filed with the SEC on January 11, 2012 as part of our Amended Current Report on Form 8-K/A.
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10.26#	Executive Employment Agreement by and between VolitionRx and Cameron Reynolds effective as of January 1, 2015	Previously filed.
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# Management contract or compensatory plan.

**STRADLING YOCCA CARLSON & RAUTH, P.C.**  
660 NEWPORT CENTER DRIVE, SUITE 1600  
NEWPORT BEACH, CA 92660-6422  
SYCR.COM

NEWPORT BEACH  
RENO  
SAN DIEGO  
SACRAMENTO  
SAN FRANCISCO  
SANTA BARBARA  
SANTA MONICA

February 4, 2015

VolitionRX Limited  
1 Scotts Road  
#24-05 Shaw Centre  
Singapore 228208

Re: VolitionRX Limited Registration Statement on Form S-1

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by VolitionRX Limited, a Delaware corporation (the “**Company**”), of a Registration Statement on Form S-1 (Filing No. 333-200628) (as amended, and as may be further amended or supplemented, the “**Registration Statement**”) with the Securities and Exchange Commission (the “**Commission**”) under the Securities Act of 1933, as amended (the “**Securities Act**”). The Registration Statement relates to the underwritten public offering of shares (the “**Shares**”) of the Company’s common stock, par value \$0.001 per share, having an aggregate offering price of up to \$11.50 million, which includes Shares that may be sold by the Company pursuant to the exercise of an over-allotment option granted to the underwriters by the Company. The Shares are being sold to the underwriters named in, and pursuant to, an underwriting agreement to be entered into by and among the Company and such underwriters.

In connection with the preparation of this opinion, we have examined such documents and considered such questions of law as we have deemed necessary or appropriate. 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. As to questions of fact material to our opinions, we have relied upon the certificates of certain officers of the Company.

In our capacity as your counsel in connection with the registration, we are familiar with the proceedings taken and proposed to be taken by the Company in connection with the authorization, issuance and sale of the Shares. For purposes of this opinion, we have assumed that such proceedings to be taken in the future will be timely completed in the manner presently proposed and that the terms of the offering will otherwise be in compliance with law.

For purposes of this opinion, we have also assumed that, prior to and at the time of the issuance of any of the Shares, the Company shall have a sufficient number of authorized but unissued shares under the Company’s Amended and Restated Certificate of Incorporation.

Based upon the foregoing, we are of the opinion that the Shares have been duly authorized and, when issued and sold in the manner described in the underwriting agreement and the Registration Statement, will be validly issued, fully paid and non-assessable.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.



We are members of the Bar of the State of California and, accordingly, do not purport to be experts on or to be qualified to express any opinion herein concerning, nor do we express any opinion herein concerning, any laws other than the laws of the State of California and the General Corporation Law of the State of Delaware.

We understand that you wish to file this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act and to reference the firm's name under the caption "Legal Matters" in the prospectus which forms part of the Registration Statement, and we hereby consent thereto. In 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 or the rules and regulations of the Commission promulgated thereunder.

This opinion is intended solely for use in connection with the issuance and sale of the Shares pursuant to the Registration Statement and is not to be relied upon for any other purpose.

Very truly yours,

/s/ STRADLING YOCCA CARLSON & RAUTH

STRADLING YOCCA CARLSON & RAUTH

**VOLITIONRX LIMITED**  
**[•] SHARES OF COMMON STOCK**  
**UNDERWRITING AGREEMENT**

[•], 2015

National Securities Corporation  
410 Park Avenue  
14<sup>th</sup> Floor  
New York, NY 10022

Lake Street Capital Markets, LLC  
225 South Sixth Street  
Suite 2050  
Minneapolis, MN 55402

Ladies and Gentlemen:

VolitionRX Limited, a Delaware corporation (the “Company”) proposes, subject to the terms and conditions stated herein, to issue and sell to National Securities Corporation and Lake Street Capital Markets, LLC and each of the other Underwriters named in Schedule VII hereto, if any (each, an “Underwriter” and collectively, the “Underwriters”), an aggregate of [•] fully paid shares (the “Firm Shares”) and, at the election of the Underwriters, up to [•] shares (the “Additional Shares” and together with the Firm Shares, the “Securities”) of the Company’s \$0.001 par value common stock (the “Common Stock”).

The Company and the Underwriters hereby confirm their agreement with respect to the purchase and sale of the Securities as follows:

1. **REGISTRATION STATEMENT AND PROSPECTUS.** The Company has prepared and filed with the U.S. Securities and Exchange Commission (the “Commission”) a registration statement on Form S-1 (File No. 333-200628) under the U.S. Securities Act of 1933, as amended (the “Securities Act”), and the rules and regulations (the “Rules and Regulations”) of the Commission promulgated thereunder, and such amendments to such registration statement as may have been required to the date of this Agreement. Such registration statement has been declared effective by the Commission. Except as the context may otherwise require, such registration statement, as amended, on file with the Commission at the time it became effective (including any preliminary prospectus included in the registration statement or filed with the Commission pursuant to Rule 424(a) under the Act (each, a “Preliminary Prospectus”), financial statements, schedules, exhibits and all other documents filed as a part thereof, and all information deemed to be a part thereof as of its effective date pursuant to paragraph (b) of Rule 430A of the Rules and Regulations) is referred to herein as the “Registration Statement.” The Preliminary Prospectus, subject to completion, dated [•], that was included in the Registration Statement immediately prior to the Applicable Time is hereinafter called the “Pricing Prospectus.” The final prospectus in the form first furnished to the Underwriters for use in the Offering, is hereinafter called the “Prospectus.”

“Applicable Time” means [•] [a.m.][p.m.], Eastern time, on the date of this Agreement.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 of the Rules and Regulations (“Rule 433”), including without limitation any “free writing prospectus” (as defined in Rule 405 of the Rules and Regulations) relating to the Securities that is (i) required to be filed with the Commission by the Company, (ii) a “road show that is a written communication” within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission, or (iii) exempt from filing with the Commission pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the Offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g).

“Issuer General Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors (other than a “bona fide electronic road show,” as defined in Rule 433 (the “Bona Fide Electronic Road Show”), as evidenced by its being specified in Schedule I hereto.

“Issuer Limited Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

“Pricing Disclosure Package” means any Issuer General Use Free Writing Prospectus issued at or prior to the Applicable Time, the Pricing Prospectus and the information included on Schedule II hereto considered together.

## 2. PURCHASE, SALE AND DELIVERY OF SECURITIES.

(a) On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, (i) the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at a purchase price equal to \$[\*] (the “Per Share Price”), the Firm Shares as set forth opposite the name of such Underwriter on Schedule VII hereto and (ii) in the event and to the extent that the Underwriters shall exercise the election to purchase Additional Shares as provided below, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the Per Share Price, that portion of the number of Additional Shares as to which such election shall have been exercised (to be adjusted so as to eliminate fractional shares) determined by multiplying such number of Additional Shares by a fraction, the numerator of which is the maximum number of Additional Shares which such Underwriter is entitled to purchase as set forth opposite the name of such Underwriter in Schedule VII hereto and the denominator of which is the maximum number of Additional Shares that all of the Underwriters are entitled to purchase hereunder.

As referenced in Section 2(a)(ii) above, the Company hereby grants to the several Underwriters the option to purchase from the Company an aggregate of up to [\*] Additional Shares, at the Per Share Price. This option may be exercised by National Securities Corporation at any time (but not more than once) on or before the date that is thirty (30) days following the date hereof, by written notice to the Company. Such notice shall set forth the aggregate number of Additional Shares as to which the option is being exercised, and the date and time when the Additional Shares are to be delivered (such date and time being herein referred to as the “Option Closing Date”); provided, however, that the Option Closing Date shall not be earlier than the Closing Date nor earlier than the second business day after the date on which the option shall have been exercised nor later than the fifth business day after the date on which the option shall have been exercised unless the Company and the Underwriters otherwise agree.

Payment of the purchase price and delivery for the Additional Shares shall be made at the Option Closing Date in the same manner and at the same office as the payment for the Firm Shares as set forth in subparagraph (b) below.

The Firm Shares are to be offered initially to the public (the “Offering”) at the offering price set forth on the cover page of the Prospectus.

(b) The Firm Shares will be delivered by the Company to the Underwriters for the Underwriters’ accounts against payment of the purchase price therefor by wire transfer of same day funds payable to the order of the Company, as appropriate, at the offices of National Securities Corporation, 410 Park Avenue, 14<sup>th</sup> Floor, New York, NY 10022, or such other location as may be mutually acceptable, (i) with respect to the Firm Shares, at 8:00 a.m. Pacific time on the third (or if the Firm Shares are priced, as contemplated by Rule 15c6-1(c) under the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”), after 4:30 p.m. Eastern time, the fourth) full business day following the date hereof, or at such other time and date as the Underwriters and the Company determine pursuant to Rule 15c6-1(a) under the Exchange Act (such time and date of delivery being herein referred to as the “Closing Date”), and (ii) with respect to the Additional Shares, at 8:00 a.m. Pacific time on the Option Closing Date. To the extent the Company is eligible for full fast transfer at the time, if the Underwriters so elect, delivery of the Securities may be made by credit through full fast transfer to the account at The Depository Trust Company designated by the Underwriters. Certificates representing the Securities, in definitive form and in such denominations and registered in such names as the Underwriters may request upon at least two business days’ prior notice to the Company, will be made available for checking and packaging not later than 10:30 a.m., Pacific time, on the business day next preceding the applicable closing date at the offices of National Securities Corporation, 410 Park Avenue, 14<sup>th</sup> Floor, New York, NY 10022, or such other location as may be mutually acceptable.

3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY. The Company represents and warrants to, and agrees with, the Underwriters as follows:

(a) No order preventing or suspending the use of the Registration Statement (including any post-effective amendment thereto), any Preliminary Prospectus or the Prospectus has been issued by the Commission and each such document, at the time of filing or the time of first use within the meaning of the Rules and Regulations, in each case as applicable, complied in all material respects with the requirements of the Securities Act and the Rules and Regulations and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; except that the foregoing shall not apply to statements in or omissions from the Registration Statement (including any post-effective amendment thereto), any Preliminary Prospectus or the Prospectus made in reliance upon, and in conformity with, written information furnished to the Company by the Underwriters specifically for use in the preparation thereof.

(b) To the Company's knowledge, 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 knowledge of the Company, are contemplated or threatened by the Commission.

(c) (i) The Registration Statement (including any post-effective amendment thereto), at the time it became effective, at the Closing Date and the Option Closing Date (if applicable), and (ii) each Preliminary Prospectus and the Prospectus (or any amendment or supplement to the Prospectus), at the time of filing or the time of first use within the meaning of the Rules and Regulations, in each case as applicable, at the Closing Date and the Option Closing Date (if applicable), complied and will comply in all material respects with the applicable requirements and provisions of the Securities Act and the Rules and Regulations 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, in the light of the circumstances under which they were made, not misleading. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the required information in all material respects and is prepared in accordance with the rules and regulations of the Commission applicable thereto. The representations and warranties set forth in the two immediately preceding sentences do not apply to statements in or omissions from the Registration Statement (including any post-effective amendment thereto), any Preliminary Prospectus or the Prospectus made in reliance upon, and in conformity with, written information furnished to the Company by the Underwriters specifically for use in the preparation thereof.

(d) Neither (i) the Pricing Disclosure Package, nor (ii) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the Pricing Disclosure Package, includes, or included as of the Applicable Time, any untrue statement of a material fact or omits or omitted as of the Applicable Time to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the Registration Statement, the Pricing Prospectus or the Prospectus or any amendment thereof or supplement thereto made in reliance upon, and in conformity with, written information furnished to the Company by the Underwriters specifically for use therein.

(e) (i) Each Issuer Free Writing Prospectus, as of its issue date, did not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus made in reliance upon, and in conformity with, written information furnished to the Company by the Underwriters specifically for use therein.

(ii) Each Issuer Free Writing Prospectus satisfied, as of its issue date, all other conditions to use thereof as set forth in Rules 164 and 433 under the Securities Act.

(f) The financial statements of the Company, together with the related notes, included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, comply in all material respects with the requirements of the Securities Act and the Rules and Regulations and fairly present in all material respects the consolidated financial position of the Company and its Subsidiaries (as defined below) as of the dates indicated and the consolidated results of operations and statements of cash flows for the periods therein specified in conformity with Generally Accepted Accounting Principles within the United States of America ("GAAP") consistently applied throughout the periods involved; and the supporting schedules included in the Registration Statement present fairly in all material respects the information required to be stated therein. No other financial statements or schedules are required by the Securities Act or the Rules and Regulations to be included in the Registration Statement, the Pricing Disclosure Package or the Prospectus. To the Company's knowledge, Sadler, Gibb & Associates, LLC (the "Auditor"), which has expressed its opinion with respect to the audited financial statements and schedules filed as a part of the Registration Statement and included in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, is an independent public accounting firm within the meaning of the Securities Act and the Rules and Regulations and such accountant is not in violation of the auditor independence requirements of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act").

(g) The Company and each of its Subsidiaries (as defined below) has been duly organized and is validly existing as a corporation under the laws of its jurisdiction of incorporation or formation. Where applicable under the laws of the jurisdiction of incorporation or formation of the Company and each of its Subsidiaries, or under the laws of each jurisdiction in which the Company and each of its Subsidiaries owns or leases real property or in which the conduct of their respective businesses makes qualification necessary, each of the Company and each of its Subsidiaries is in good standing under such laws, except where the failure to be so qualified would not reasonably be expected to have a Material Adverse Effect. For purposes of this Agreement, the term “Subsidiary” means each subsidiary of the Company listed on Schedule III hereto (collectively, the “Subsidiaries”). Each of the Company and its Subsidiaries has the corporate power and authority to own its properties and conduct its business as currently being carried on and as described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, and is duly qualified to do business as a foreign entity in each jurisdiction in which it owns or leases real property or in which the conduct of its business makes such qualification necessary and in which the failure to so qualify would have a material adverse effect upon the business, prospects, properties, operations, condition (financial or otherwise) or results of operations of the Company and its Subsidiaries, taken as a whole, or in its ability to execute or perform its obligations under this Agreement (“Material Adverse Effect”).

(h) Except as contemplated herein or disclosed in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, subsequent to the respective dates as of which information is given in the Pricing Disclosure Package, neither the Company nor any of its Subsidiaries has incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, or declared or paid any dividends or made any distribution of any kind with respect to its capital stock; and there has not been any change in the capital stock (other than a change in the number of outstanding shares of Common Stock due to the issuance of equity compensation awards under the Company’s equity compensation plans, approved by the Board of Directors of the Company, or shares of Common Stock upon the exercise of outstanding options or warrants), or any material change in the short-term or long-term debt, or any issuance of options, warrants, convertible securities or other rights to purchase the capital stock, of the Company (other than issuances of equity compensation awards under the Company’s equity compensation plans, approved by the Board of Directors of the Company) or any of its Subsidiaries, or any material adverse change in the financial condition, business, prospects, property, operations or results of operations of the Company and its Subsidiaries, taken as a whole (“Material Adverse Change”).

(i) Except as set forth in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, there is not pending or, to the knowledge of the Company, threatened or contemplated, any action, suit or proceeding to which the Company or any of its Subsidiaries is a party or of which any property or assets of the Company or any of its Subsidiaries is the subject before or by any court or governmental agency, authority or body, or any arbitrator, which, individually or in the aggregate, would reasonably be expected to result in a Material Adverse Change.

(j) This Agreement has been duly authorized, executed and delivered by the Company, and constitutes a valid, legal and binding obligation of the Company, enforceable in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and subject to general principles of equity. The execution, delivery and performance of this Agreement and the consummation of the transactions herein contemplated will not result in a breach or violation of, or conflict with, any of the terms and provisions of, or constitute a default under, any statute, any agreement or instrument to which the Company is a party or by which it is bound or to which any of its property is subject, or any order, rule, regulation or decree of any court or governmental agency or body having jurisdiction over the Company or any of its properties, except, in each case, for such breaches, violations, conflicts or defaults that would not reasonably be expected to result in a Material Adverse Effect. The execution, delivery and performance of this Agreement and the consummation of the transactions herein contemplated will not result in a breach or violation of or conflict with any of the terms and provisions of, or constitute a default under, the Company’s certificate of incorporation or by-laws (collectively and as each may be amended from time to time, the “Governing Documents”) or the applicable organizational documents of any Subsidiary. No consent, approval, authorization or order of, or filing with, any court or governmental agency or body is required for the execution, delivery and performance of this Agreement or for the consummation of the transactions contemplated hereby, including the issuance or sale of the Securities by the Company, except such as may be required under the Securities Act, state securities or blue sky laws, the NYSE MKT Listing Standards, or the approval by the Financial Industry Regulatory Authority (“FINRA”) of the underwriting terms and arrangements; and the Company has the corporate power and authority to enter into this Agreement and to authorize, issue and sell the Securities as contemplated by this Agreement.

(k) All of the issued and outstanding shares of capital stock of the Company, including the outstanding shares of Common Stock are duly authorized and validly issued, fully paid and nonassessable, have been issued in compliance with all federal and state securities laws and were not issued in violation of or subject to any preemptive rights or other rights to subscribe for or purchase securities that have not been waived in writing (a copy of which has been delivered to counsel to the Underwriters); the Securities which may be sold hereunder by the Company have been duly authorized and, when issued, delivered and paid for in accordance with the terms of this Agreement, will have been validly issued and will be fully paid; and the capital stock of the Company, including the Firm Shares and Additional Shares, conforms to the description thereof in the Registration Statement, the Pricing Disclosure Package, and the Prospectus. Except as otherwise stated in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, there are no preemptive rights or other rights to subscribe for or to purchase, or any restriction upon the voting or transfer of, any shares of Common Stock pursuant to the Governing Documents or any agreement or other instrument to which the Company is a party or by which the Company is bound. Neither the filing of the Registration Statement nor the offering or sale of the Securities as contemplated by this Agreement gives rise to any rights for or relating to the registration of any shares of Common Stock or other securities of the Company that have not been waived. All of the issued and outstanding shares of capital stock of each Subsidiary has been duly and validly authorized and issued and is fully paid and nonassessable, and, except as otherwise described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, the Company owns of record and beneficially, free and clear of any security interests, claims, liens, proxies, equities or other encumbrances, all of the issued and outstanding shares of such stock. Except as described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, and except for share issuances to members of the Company's clinical advisory board consistent with their terms of service in effect on the date hereof, there are no options, warrants, agreements, contracts or other rights in existence to purchase or acquire from the Company or any Subsidiary any shares of the capital stock of the Company or any Subsidiary. The Company has an authorized and outstanding capitalization as set forth in the Registration Statement, the Pricing Disclosure Package, and the Prospectus under the captions "Capitalization" and "Description of Securities".

(l) The Company and each Subsidiary holds, and is operating in compliance in all material respects with, all franchises, grants, authorizations, licenses, permits, easements, consents, certificates and orders of any governmental or self-regulatory body required for the conduct of its business and all such franchises, grants, authorizations, licenses, permits, easements, consents, certifications and orders are valid and in full force and effect in all material respects; and the Company is in compliance in all material respects with all applicable federal, state, local and foreign laws, regulations, orders and decrees, including the NYSE MKT Listing Standards.

(m) The Company and its Subsidiaries have good and marketable title to all property (whether real or personal) described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus as being owned by them which are material to the business of the Company, in each case free and clear of all liens, claims, security interests, other encumbrances or defects except such as are described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus. The property held under lease by the Company and its Subsidiaries is held by them under valid and enforceable leases with only such exceptions with respect to any particular lease as do not interfere in any material respect with the conduct of the business of the Company or its Subsidiaries taken as a whole.

(n) The Company and each of its Subsidiaries owns or possesses all patents, patent applications, trademarks, service marks, tradenames, trademark registrations, service mark registrations, copyrights, licenses, inventions, trade secrets and rights necessary for the conduct of the business of the Company and its Subsidiaries as currently carried on and as described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus; except as stated in the Registration Statement, the Pricing Disclosure Package, and the Prospectus and except as would not reasonably be expected to result, individually or in the aggregate, in a Material Adverse Change, no name which the Company or any of its Subsidiaries uses and no other aspect of the business of the Company or any of its Subsidiaries will involve or give rise to any infringement of, or license or similar fees for, any patents, patent applications, trademarks, service marks, tradenames, trademark registrations, service mark registrations, copyrights, licenses, inventions, trade secrets or other similar rights of others material to the business or prospects of the Company and its Subsidiaries and neither the Company nor any of its Subsidiaries has received any notice alleging any such infringement or fee.

(o) Neither the Company nor any of its Subsidiaries is (i) in violation of its respective organizational documents, or (ii) in breach of, or otherwise in default under (and no event has occurred which, with notice or lapse of time or both, would constitute such a default in the performance of) any material obligation, agreement or condition contained in any bond, debenture, note, indenture, loan agreement or any other material contract, lease or other instrument to which it is subject or by which any of them may be bound, or to which any of the material property or assets of the Company or any of its Subsidiaries is subject, except, with respect to clause (ii), for such breaches or defaults as would not reasonably be expected to result in a Material Adverse Change.



(p) The Company and its Subsidiaries have timely filed all returns required to be filed with taxing authorities prior to the date hereof and are not in default in the payment of any taxes which were payable pursuant to said returns or any assessments with respect thereto, other than any which the Company or any of its Subsidiaries is contesting in good faith.

(q) The Company has not distributed and will not distribute any prospectus or other offering material in connection with the offering and sale of the Securities other than any Preliminary Prospectus, the Pricing Disclosure Package or the Prospectus or other materials permitted by the Securities Act to be distributed by the Company; provided, however, that, except as set forth on Schedule I, the Company has not made and will not make any offer relating to the Securities that would constitute a “free writing prospectus” as defined in Rule 405 under the Securities Act, except in accordance with the provisions of Section 4(n) of this Agreement.

(r) The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and has been approved for listing on the NYSE MKT. The Company has taken no action designed to terminate the registration of the Common Stock under the Exchange Act or delisting the Common Stock from NYSE MKT, nor has the Company received any notification that the Commission or NYSE MKT is contemplating terminating such registration or listing.

(s) Other than the subsidiaries of the Company listed on Schedule III hereto, the Company, directly or indirectly, owns no capital stock or other equity or ownership or proprietary interest in any corporation, partnership, association, trust or other entity.

(t) The Company maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management’s general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (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 existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, since December 31, 2013, there has been (x) no material weakness or significant deficiency in the Company’s internal control over financial reporting (whether or not remediated), (y) no change in the Company’s internal control over financial reporting that has materially affected, or is reasonably expected to materially affect, the Company’s internal control over financial reporting and (z) no fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

(u) Other than as contemplated by this Agreement, the Company has not incurred any liability for any finder’s or broker’s fee or agent’s commission in connection with the execution and delivery of this Agreement or the consummation of the transactions contemplated hereby. Within the six (6) months prior to the date the Registration Statement was initially filed with the Commission, except as set forth on Schedule VIII, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to (i) any person as a finder’s or broker’s fee, agent’s commission or otherwise in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company, (ii) to any FINRA member, or (iii) to any person or entity that has any direct or indirect affiliation or association with any FINRA member, other than the payment to the Underwriters as provided hereunder in connection with the transactions contemplated hereunder. None of the net proceeds of the transactions contemplated hereunder will be paid by the Company directly to any participating FINRA member or its affiliates, except as specifically authorized herein. To the Company’s knowledge, no officer, director or principal shareholder of the Company has any direct or indirect affiliation or association with any FINRA member (as determined in accordance with the rules and regulations of FINRA).

(v) The Company carries, or is covered by, insurance in such amounts and covering such risks as is adequate for the conduct of its business and the value of its properties and as is customary for companies engaged in similar businesses in similar industries.

(w) The Company is not and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, will not be an “investment company,” as such term is defined in the Investment Company Act of 1940, as amended.

(x) As of the filing date of the Registration Statement, the Company was eligible to file a Registration Statement on Form S-1 with the Commission.

(y) The Company is in substantial compliance with all applicable provisions of the Sarbanes-Oxley Act and the rules and regulations of the Commission thereunder that are effective with respect to the Company on the date of this Agreement.

(z) The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act) and except as described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, such controls and procedures are effective, in ensuring that material information relating to the Company, including its Subsidiaries, is made known to the principal executive officer and the principal financial officer. The Company has utilized such controls and procedures in preparing and evaluating the disclosures in the Registration Statement, the Pricing Disclosure Package, and the Prospectus.

(aa) Neither the Company nor any of its Subsidiaries, nor, to the knowledge of the Company, any of its directors, officers, agents, employees, affiliates or other person acting on their behalf is aware of or has taken any action, directly or indirectly, that has violated or would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the “FCPA”). The Company and its Subsidiaries have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(bb) The operations of the Company and its Subsidiaries are and have been conducted at all times, in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, and all rules, regulations and guidelines thereunder (collectively, the “Money Laundering Laws”), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its Subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(cc) Neither the Company nor any of its Subsidiaries is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department (“OFAC”); and the Company will not directly or indirectly use the proceeds of this offering of the Securities contemplated hereby, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(dd) No approval of the stockholders of the Company is required for the Company to issue and deliver the Securities to the Underwriters.

(ee) Except as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no business relationships or related party transactions involving the Company, its Subsidiaries or any director and executive officer listed on Schedule VI (collectively such directors and executive officers are referred to as “Insiders”) or other person required to be described the Registration Statement, the Pricing Disclosure Package and the Prospectus, pursuant to the Securities Act and the Rules and Regulations, that have not been described as required. The descriptions of the events and transactions set forth in the Registration Statement, the Pricing Disclosure Package, and the Prospectus under the caption “Certain Relationships and Related Transactions” are true, correct and complete in all material respects.

(ff) The Company is, and will be on the Closing Date and Option Closing Date, in material compliance with (i) the applicable corporate governance requirements of the Securities Act, the Exchange Act and the rules and regulations thereunder, and (ii) the initial listing standards under the NYSE MKT Company Guide.

(gg) The section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies” in the Registration Statement, the Pricing Disclosure Package and the Prospectus truly, correctly and completely describes (i) accounting policies which the Company believes are the most important in the portrayal of the Company’s financial position and results of operations and which require management’s most difficult, subjective or complex judgments (“Critical Accounting Policies”), (ii) judgments and uncertainties affecting the application of Critical Accounting Policies, and (iii) the likelihood that materially different amounts would be reported under different conditions or using different assumptions. The Audit Committee of the Board of Directors of the Company and management have reviewed and agreed with the selection, application and disclosure of Critical Accounting Policies and management have consulted with the Company’s auditor regarding such disclosure.

(hh) No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in the Registration Statement, the Pricing Disclosure Package or the Prospectus has been made without a reasonable basis or has been disclosed other than in good faith.

(ii) Nothing has come to the attention of the Company that has caused it to believe that the statistical and market-related data included in the Registration Statement, the Pricing Disclosure Package, and the Prospectus is not based on or derived from sources that are reliable and accurate in all material respects.

(j) Any certificate contemplated by this Agreement signed by any officer of the Company and delivered to the Underwriters or to the counsel for the Underwriters shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

4. COVENANTS. The Company covenants and agrees with the Underwriters as follows:

(a) During the period beginning on the date hereof and ending on the later of the Closing Date (or the Option Closing Date, if applicable) or such date, as in the opinion of counsel for the Underwriters, the Prospectus is no longer required by law to be delivered (or in lieu thereof the notice referred to in Rule 173(a) under the Securities Act is no longer required to be provided), in connection with sales by an underwriter or dealer (the "Prospectus Delivery Period"), prior to amending or supplementing the Registration Statement, the Pricing Disclosure Package or the Prospectus, the Company shall furnish to the Underwriters for review a copy of each such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which the Underwriters reasonably object in writing.

(b) During the Prospectus Delivery Period, the Company shall promptly advise the Underwriters in writing (i) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (ii) of 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 Pricing Disclosure Package or the Prospectus, (iii) of the time and date that any post-effective amendment to the Registration Statement becomes effective and (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or of any order preventing or suspending its use or the use of any Preliminary Prospectus, the Pricing Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the shares of Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or 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 its reasonable efforts to obtain the lifting of such order as soon as reasonably practicable. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b) and 430A, as applicable, 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 (without reliance on Rule 424(b)(8) or Rule 164(b)).

(c) (i) During the Prospectus Delivery Period, the Company will comply as far as it is able with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act so far as necessary to permit the continuance of sales of or dealings in the Securities as contemplated by the provisions hereof, the Pricing Disclosure Package, and the Registration Statement and the Prospectus. If during such period any event occurs as a result of which the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Pricing Disclosure Package) would include an 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 then existing, not misleading, or if during such period it is necessary or appropriate in the opinion of the Company or its counsel or the Underwriters or counsel to the Underwriters to amend the Registration Statement or supplement the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Pricing Disclosure Package) to comply with the Securities Act in order to comply with the Securities Act, the Company will promptly notify the Underwriters and will amend the Registration Statement or supplement the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Pricing Disclosure Package) or file, subject to Section 4(a) hereof, such document (at the expense of the Company) so as to correct such statement or omission or effect such compliance.

(ii) If at any time following issuance of an Issuer Free Writing Prospectus there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus 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 prevailing at that subsequent time, not misleading, the Company has promptly notified or promptly will notify the Underwriters and has promptly amended or will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(d) The Company shall take or cause to be taken all necessary action to qualify the Securities for sale under the securities laws of such jurisdictions as the Underwriters reasonably designate and to continue such qualifications in effect so long as required for the distribution of the Securities, except that the Company shall not be required in connection therewith to qualify as a foreign corporation or as a dealer in securities in any state in which it is not so qualified or to execute a general consent to service of process in any state or to subject itself to taxation in respect of doing business in any state in which it is not otherwise so subject.

(e) The Company will furnish to the Underwriters and counsel for the Underwriters, without charge, copies of the Registration Statement, each Preliminary Prospectus, the Prospectus, any Issuer Free Writing Prospectus, and all amendments and supplements to such documents, in each case as soon as available and in such quantities as the Underwriters may from time to time reasonably request.

(f) The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement (which need not be audited) covering a 12-month period that shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations.

(g) The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or cause to be paid (i) all expenses (including transfer taxes allocated to the respective transferees) incurred in connection with the delivery to the Underwriters of the Securities, (ii) all expenses and fees of the Company in connection with the preparation, printing, filing, delivery, and shipping of the Registration Statement (including the financial statements therein and all amendments, schedules, and exhibits thereto), the Securities, each Preliminary Prospectus, the Prospectus, any Issuer Free Writing Prospectus and any amendment thereof or supplement thereto, and the printing, delivery, and shipping of this Agreement and other underwriting documents, including Blue Sky Memoranda (covering the states and other applicable jurisdictions), (iii) all filing fees in connection with the qualification of the Securities for offering and sale by the Underwriters or by dealers under the securities or blue sky laws of the states and other jurisdictions which the Underwriters shall designate, (iv) the fees and expenses of any transfer agent or registrar, (v) the filing fees incident to any required review and approval by FINRA of the terms of the sale of the Securities, (vi) listing fees, if any, (vii) all fees, disbursements and expenses (including but not limited to fees and disbursements of counsel, travel expenses, facsimile and telephone charges) incurred by the Underwriters in connection with the Offering or in contemplation of performing their obligations hereunder, and (viii) all other costs and expenses incident to the performance of its obligations hereunder that are not otherwise specifically provided for herein; provided, however, that the maximum amount that shall be reimbursed to the Underwriters by the Company under this Section 4(g), including legal expenses, shall be \$125,000 ("Expense Cap"); provided further that the maximum amount to be reimbursed by the Company for Underwriter's legal expenses will be \$100,000 ("Legal Expense Cap"). If this Agreement is terminated by the Underwriters pursuant to Section 8 hereof or if the Offering is not consummated for any reason including any failure, refusal or inability on the part of the Company to perform any agreement on its part to be performed, or because any other condition of the Underwriters' obligations hereunder required to be fulfilled by the Company is not fulfilled, the Company will reimburse the Underwriters for all out-of-pocket disbursements (including but not limited to fees and disbursements of counsel, printing expenses, travel expenses, postage, facsimile and telephone charges) incurred by the Underwriters in connection with the Offering or in contemplation of performing their obligations hereunder within five (5) days following the presentment to the Company of a written accounting related to such fees and disbursements, subject to the Expense Cap and Legal Expense Cap. The parties acknowledge that the Company previously paid \$50,000 to counsel selected by Underwriters which shall be credited towards both the Legal Expense Cap and the Expense Cap regardless of whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated.

(h) The Company will apply the net proceeds from the sale of the Securities to be sold by it hereunder for the purposes set forth in the Pricing Disclosure Package and in the Prospectus.

(i) None of the Company and its Subsidiaries or, to the Company's knowledge, any of its or their employees, officers or directors, have taken or will take, directly or indirectly, any action designed to or which might reasonably be expected to cause or result in, or which has constituted, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(j) Except as described in the Pricing Disclosure Package and in the Prospectus, the Company will not incur any liability for any finder's, broker's or agent's fee or commission in connection with the execution and delivery of this Agreement or the consummation of the transactions contemplated hereby.

(k) During the Prospectus Delivery Period, the Company will file on a timely basis (subject to applicable grace periods) with the Commission such periodic and current reports as are required by the Exchange Act and the rules and regulations of the Commission thereunder.

(l) Except as described in the Registration Statement, the Pricing Disclosure Package, and the Prospectus, the Company and its Subsidiaries will maintain such controls and other procedures, including without limitation those applicable to the Company and required by Sections 302 and 906 of the Sarbanes-Oxley Act and the applicable regulations thereunder, that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, including without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and its principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure, to ensure that material information relating to Company, including its Subsidiaries, is made known to them by others within those entities.

(m) The Company and its Subsidiaries will substantially comply with all effective applicable provisions of the Sarbanes-Oxley Act.

(n) The Company will not, for a period of one-hundred-eighty (180) days from the date of the Prospectus (the "Lock-Up Period"), without the prior written consent of the Underwriters, directly or indirectly offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for non-restricted shares of Common Stock during the Lock-Up Period, other than (i) the Company's sale of the Securities hereunder, (ii) the issuance of shares of Common Stock or any equity awards (including the issuance of shares of Common Stock upon exercise or settlement of such equity awards) pursuant to the Company's employee benefit plans, stock option plans, employee stock purchase plans, or other employee compensation plans as such plans are in existence on the date hereof and described in the Prospectus, and (iii) the issuance of shares of Common Stock pursuant to the vesting or exercise of equity awards, including options, restricted stock units, or warrants, outstanding on the date hereof. The restrictions set forth in the preceding sentence shall not prohibit the Company, during the Lock-Up Period, with the prior written consent of the Underwriters, which shall not be unreasonably withheld, from issuing or granting (x) shares of Common Stock not registered under the Securities Act; or (y) any security not registered under the Securities Act which is convertible into or exercisable or exchangeable for shares of Common Stock (collectively, (x) and (y), "Restricted Securities"), provided that in each case, the resale of such Restricted Securities is restricted pursuant to the Securities Act and applicable Rules and Regulations during the Lock-Up Period, and such issuances/grants are not integrated with the sale of the Securities hereunder and provided further that no consent of the Underwriters shall be required for the issuance of Restricted Securities (A) in connection with strategic merger or acquisitions transactions or joint ventures, (B) to consultants or advisers in the ordinary course of business and (C) in connection with a debt financing, which may include the issuance of Restricted Securities (which may include warrants), provided that the total number of Restricted Securities (including any securities issuable upon exercise or conversion thereof) do not exceed 5% of the Company's then-issued and outstanding shares of Common Stock, in each case which are approved by the Board of Directors of the Company. For example only and without limitation, the Company may issue, grant or sell Restricted Securities in connection with a debt financing (which may include warrant coverage), for acquisitions or fund raising. The Company will cause each Insider to furnish to the Underwriters, prior to the Closing Date, a letter, substantially in the form of Schedule V hereto, pursuant to which each Insider shall agree, among other things, subject to the terms and conditions set forth in each such letter, not to directly or indirectly offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for shares of Common Stock, not to engage in any swap or other agreement or arrangement that transfers, in whole or in part, directly or indirectly, the economic risk of ownership of shares of Common Stock or any such securities, during the period of one-hundred-eighty (180) days from the date of the Prospectus, without the prior written consent of the Underwriters, subject to certain exceptions set forth in such letter. The Company also agrees that, without the prior written consent of the Underwriters, during such one-hundred-eighty (180) day period, the Company will not file any registration statement, preliminary prospectus or prospectus, or any amendment or supplement thereto, under the Securities Act for any such transaction or which registers, or offers for sale, shares of Common Stock, Restricted Securities or any securities convertible into or exercisable or exchangeable for shares of Common Stock, except for registration statements on Form S-8 relating to employee benefit plans. The Company hereby agrees that (1) if it issues an earnings release or material news, or if a material event relating to the Company occurs, during the last seventeen days of the Lock-Up Period, or (2) if prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results during the sixteen-day period beginning on the last day of the Lock-Up Period, the restrictions imposed by this Section 4(o) shall continue to apply until the expiration of the eighteen-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

(o) The Company shall retain an independent registered public accounting firm reasonably acceptable to the Underwriters, and the Company shall continue to retain an independent registered public accounting firm for a period of at least three years after from the date the Registration Statement was declared effective. The Underwriters acknowledge that the Auditor is acceptable to the Underwriters.

(p) The Company shall advise the Underwriters (who shall make an appropriate filing with FINRA) if it becomes aware that any director, officer or 5% or greater shareholder of the Company becomes an affiliate or associated person of a FINRA member participating in the distribution of the Securities from the date hereof to the date that is six months following the Closing Date.

(q) The Company shall retain, at its expense, a transfer agent and registrar for the Common Stock acceptable to the Underwriters (the “Transfer Agent”). VStock Transfer, LLC is acceptable to the Underwriters to act as Transfer Agent for the Common Stock.

(r) The Company agrees (i) to make a determination on an annual basis as to whether it was a “passive foreign investment company” within the meaning of Section 1297(a) of the Internal Revenue Code of 1986, as amended (the “Code”) for the preceding fiscal year, including any qualifications, and (ii) to promptly report such determination in the next filing of an annual report with the Commission and to provide shareholders with the necessary information to make a “qualified electing fund” election as defined under the Code.

(s) The Company shall use commercially reasonable efforts to maintain the listing of the Common Stock on NYSE MKT for a period of at least three (3) years.

(t) From the date hereof until a date thirty (30) days after the date when the Registration Statement was declared effective, the Company will not issue press releases, proposed communications with shareholders or other interested constituencies, or other public announcements or engage in any other publicity, without (i) providing the Underwriters and its counsel with copies of same and (ii) permitting the Underwriters and its counsel to comment thereon; provided, however, that ordinary and routine communications not related to the transactions contemplated hereunder or the financial position of the Company may be provided concurrently with their release.

(u) From the date hereof until the date that is the twelve (12) month anniversary of the Closing Date, upon any proposed sale by the Company of capital stock, including common stock or securities that are convertible into or exercisable or exchangeable for shares of common stock, in any offering that involves an underwriter or placement agent, other than (A) the Company’s sale of the Securities hereunder, (B) the issuance of equity awards pursuant to the Company’s employee benefit, stock option, restricted stock, employee stock purchase or other employee compensation plans as such plans are in existence on the date hereof and described in the Prospectus or subsequently approved by the Company’s Board of Directors (including the issuance of shares of Common Stock upon the exercise, conversion or settlement of any such equity awards), (C) the issuance of shares of Common Stock pursuant to the conversion of notes, or other securities convertible into or exercisable or exchangeable for shares of Common Stock outstanding on the date hereof, (D) the issuance of shares in connection with strategic merger or acquisitions transactions or joint ventures, and (E) the issuance of shares to consultants or advisers in the ordinary course of business, (any such offering a “Subsequent Financing”), the Underwriters shall have the right to participate as an underwriter or placement agent in the Subsequent Financing with respect to an amount of shares equal to up to 20% of the shares to be issued in the Subsequent Financing (the “Participation Maximum”) on the same terms, conditions and price provided for in the Subsequent Financing. The Company agrees to provide the Underwriters reasonable written notice of its intention to effect a Subsequent Financing, which shall include the terms and conditions of such Subsequent Financing. Subject to the foregoing, National Securities Corporation may determine, in its sole and absolute discretion, the allocation of the Participation Maximum to each of the Underwriters in any Subsequent Financing.

5. **CONDITIONS OF THE UNDERWRITERS’ OBLIGATIONS.** The obligations of the Underwriters hereunder are subject to the accuracy, as of the date hereof and at each of the Closing Date and the Option Closing Date (as if made on the Closing Date or Option Closing Date, as applicable), of and compliance with all representations, warranties and agreements of the Company contained herein, to the performance by the Company of its obligations hereunder and to the following additional conditions:

(a) If filing of the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, is required under the Securities Act or the Rules and Regulations, the Company shall have filed the Prospectus (or such amendment or supplement) or such Issuer Free Writing Prospectus with the Commission in the manner and within the time period so required (without reliance on Rule 424(b)(8) or Rule 164(b)); the Registration Statement shall remain effective; no stop order suspending the effectiveness of the Registration Statement or any part thereof, or any amendment thereof, nor suspending or preventing the use of the Pricing Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened; any request of the Commission for additional information (to be included in the Registration Statement, the Pricing Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus or otherwise) shall have been complied with to the Underwriters’ satisfaction; and FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(b) The Underwriters shall not have advised the Company that the Registration Statement, the Pricing Disclosure Package or the Prospectus, or any amendment thereof or supplement thereto, or any Issuer Free Writing Prospectus, contains an untrue statement of material fact, or omits to state a material fact which is required to be stated therein or necessary to make the statements therein not misleading.

(c) Except as contemplated in the Pricing Disclosure Package and in the Prospectus, subsequent to the respective dates as of which information is given in the Pricing Disclosure Package, neither the Company nor any of its Subsidiaries shall have incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, or declared or paid any dividends or made any distribution of any kind with respect to its capital stock; and there shall not have been any change in the capital stock (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise of outstanding options or warrants), or any material change in the short-term or long-term debt of the Company, except for the extinguishment thereof, or any issuance of options, warrants, convertible securities or other rights to purchase the capital stock of the Company or any Subsidiary, or any Material Adverse Change.

(d) On the Closing Date and the Option Closing Date, Stradling, Yocca, Carlson & Rauth, P.C., counsel for the Company, shall have issued to the Underwriters (i) an opinion and (ii) a negative assurance letter, each dated as of the applicable closing date and addressed to the Underwriters, in form and substance reasonably satisfactory to the Underwriters.

(e) On the date of the Prospectus at a time prior to the execution of this Agreement, the Underwriters shall have received a letter of the Auditor (the "Comfort Letter"), dated the date of delivery thereof, and addressed to the Underwriters, in form and substance satisfactory to the Underwriters. On each of the Closing Date and the Option Closing Date (if applicable), the Underwriters shall have received a letter of the Auditor as of such closing date to the effect that the Auditor reaffirms the statements made in the Comfort Letter.

(f) On each of the Closing Date and the Option Closing Date (if applicable), there shall have been furnished to the Underwriters a certificate, dated as of such closing date and addressed to the Underwriters, signed by the chief executive officer or the chief financial officer of the Company, to the effect that:

(i) The representations and warranties of the Company in this Agreement are true and correct, in all material respects, as if made at and as of the Closing Date or Option Closing Date (as applicable), and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date or Option Closing Date (as applicable);

(ii) No stop order or other order suspending the effectiveness of the Registration Statement or any part thereof or any amendment thereof or the qualification of the Securities for offering or sale nor suspending or preventing the use of the Pricing Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, has been issued, and no proceeding for that purpose has been instituted or, to the Company's knowledge, is contemplated or threatened by the Commission or any state or regulatory body; and

(iii) The signers of said certificate have carefully examined the Registration Statement, the Pricing Disclosure Package and the Prospectus, and any amendments thereof or supplements thereto, and

(A) (i) the Registration Statement and the Prospectus (and any amendments thereof or supplements thereto) contain all statements and information required to be included therein pursuant to the Securities Act and the Rules and Regulations, (ii) the Registration Statement (and any amendment thereof) does not contain any untrue statement of a material fact or omit to state, and did not omit to state when such part of the Registration Statement (or such amendment) became effective, any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, and (iii) the Prospectus (as amended or supplemented), does not include and did not include as of its date, or the time of first use within the meaning of the Rules and Regulations, any untrue statement of a material fact or omit to state and did not omit to state as of its date, or the time of first use within the meaning of the Rules and Regulations, a material fact necessary to make the statements therein, in light of the circumstances under which they were made;

(B) the Pricing Disclosure Package (i) does not include, and did not include as of the Applicable Time, any untrue statement of a material fact, and (ii) does not omit, and did not omit as of the Applicable Time, to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(C) subsequent to the respective dates as of which information is given in the Pricing Disclosure Package, neither the Company nor any of its Subsidiaries has incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, not in the ordinary course of business, or declared or paid any dividends or made any distribution of any kind with respect to its capital stock and, except as disclosed in the Pricing Disclosure Package and in the Prospectus, there has not been any change in the capital stock (other than a change in the number of outstanding shares of Common Stock due to the issuance of equity compensation awards under the Company's equity compensation plans, approved by the Board of Directors of the Company, or shares of Common Stock upon the exercise of outstanding options or warrants), or any material change in the short-term or long-term debt, or any issuance of options, warrants, convertible securities or other rights to purchase the capital stock, of the Company (other than issuances of equity compensation awards under the Company's equity compensation plans, approved by the Board of Directors of the Company) or any of its Subsidiaries, or any Material Adverse Change; and

(D) except as stated in the Pricing Disclosure Package and in the Prospectus, there is not pending, or, to the knowledge of the Company, threatened or contemplated, any action, suit or proceeding to which the Company or any of its Subsidiaries is a party before or by any court or governmental agency, authority or body, or any arbitrator, which would reasonably be expected to result in any Material Adverse Change.

(g) By the date the Registration Statement was declared effective, the Underwriters shall have received clearance from FINRA as to the amount of compensation allowable or payable to the Underwriters as described in the Registration Statement.

(h) On the Closing Date, the Company's shares of Common Stock, including the Firm Shares and the Additional Shares, shall have been approved for listing on NYSE MKT.

(i) The Company shall have furnished to the Underwriters and counsel for the Underwriters such additional documents, certificates and evidence as the Underwriters or counsel for the Underwriters may have reasonably requested.

(j) The Underwriters shall have received the written agreements, substantially in the form of Schedule V hereto, of the Insiders.

All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof only if they are reasonably satisfactory in form and substance to the Underwriters and counsel for the Underwriters. The Company will furnish the Underwriters with such conformed copies of such opinions, certificates, letters and other documents as the Underwriters shall reasonably request.

## 6. INDEMNIFICATION AND CONTRIBUTION.

(a) The Company shall indemnify and hold harmless each Underwriter, its affiliates, their respective officers, directors, employees and agents, and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act, against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Securities Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment or supplement thereto or the omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading, or (ii) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, the Pricing Disclosure Package or the Prospectus, or any amendment or supplement thereto, or the omission or alleged omission to state therein a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, and will reimburse each Underwriter for any legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending against any such loss, claim, damage, liability or action as such expenses are incurred; provided, however, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Pricing Disclosure Package or the Prospectus, or any amendment or supplement thereto, in reliance upon, and in conformity with, written information furnished to the Company by an Underwriter expressly for inclusion therein, which information consists solely of the information described in Section 6(b) hereof.



The Company agrees that, to the extent it is obligated to indemnify and hold harmless the Underwriters pursuant to Section 6(a), it will reimburse the Underwriters on a monthly basis for all reasonable legal fees or other expenses incurred in connection with investigating or defending any claim, action, investigation, inquiry or other proceeding covered by Section 6(a), notwithstanding the absence of a judicial determination as to the propriety and enforceability of the Company's obligation to reimburse the Underwriters for such expenses and the possibility that such payments might later be held to have been improper by a court of competent jurisdiction.

To the extent that any such interim reimbursement payment is so held to have been improper, the Underwriters shall promptly return it to the Company, together with interest, compounded daily, determined on the basis of the prime rate (or other commercial lending rate for borrowers of the highest credit standing) announced from time to time by Wells Fargo Bank, N.A. (the "Prime Rate"). Any such interim reimbursement payments which are not made to the Underwriters within 30 days of a request for reimbursement shall bear interest at the Prime Rate from the date of such request.

(b) Each Underwriter, severally and not jointly, shall indemnify and hold harmless the Company, its affiliates, their respective officers, directors, employees and agents, and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act against any losses, claims, damages or liabilities to which the Company may become subject, under the Securities Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment or supplement thereto or the omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, the Pricing Disclosure Package or the Prospectus, or any amendment or supplement thereto, or the omission or alleged omission to state therein a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary Prospectus, the Pricing Disclosure Package or the Prospectus, or any amendment or supplement thereto, in reliance upon, and in conformity with, written information furnished to the Company by such Underwriter expressly for inclusion therein, and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending against any such loss, claim, damage, liability or action as such expenses are incurred. The Company hereby acknowledges that the only written information that the Underwriters have furnished to the Company expressly for use in the Pricing Disclosure Package and the Prospectus consists solely of the statements set forth in the Pricing Disclosure Package and the Prospectus in the table following the first paragraph and as set forth in the second sentence of the third paragraph, the tenth paragraph, the eleventh paragraph and the twelfth paragraph under the caption, "Underwriting."

(c) Promptly after receipt by an indemnified party under this Section 6 of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under Sections 6(a) or 6(b) hereof, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party will not relieve it from any liability which it may have to any indemnified party otherwise than under Sections 6(a) or 6(b) hereof. In case any such action is brought against any indemnified party and it notifies the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it may wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, except as provided in the following sentence, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party will not be liable to such indemnified party under this Section for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof other than reasonable costs of investigation. After notice from the indemnifying party to the indemnified party of the indemnifying party's election to assume the defense of such action, the indemnified party shall have the right to employ its own counsel in any such action, but the fees and expenses of such counsel shall be at the expense of such indemnified party unless (i) the indemnifying party and the indemnified party shall have mutually agreed to the retention of such counsel, (ii) if the named parties in any such action include both the indemnifying party and the indemnified party and the indemnified party shall have reasonably concluded that there is an actual or potential conflict between the positions of the indemnifying party and the indemnified party in conducting the defense of any such action or that there may be legal defenses available to it or other indemnified parties that are different from or additional to those available to the indemnifying party or (iii) the indemnifying party shall not have employed counsel to assume the defense of such action within a reasonable time after notice of commencement thereof, in each of which cases the fees and expenses of such counsel shall be at the expense of the indemnifying party (it being understood, however, that the indemnifying party shall not be liable for the fees and expenses of more than one separate counsel in addition to any local counsel). No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action, suit, proceeding or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action, suit, proceeding or claim and (ii) does not include a statement as to or an admission of fault, culpability or failure to act by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section is unavailable to or insufficient to hold harmless an indemnified party under Sections 6(a) or 6(b) hereof in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company and the Underwriters, respectively, from the offering of the Securities. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only the relative benefits but also the relative fault of the Company and the Underwriters, respectively, in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company and the Underwriters, respectively, shall be deemed to be in the same proportion as the total net proceeds from the offering (net of underwriting discounts and commissions but before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Section 6(d) were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 6(d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this Section 6(d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim based upon any such untrue or alleged untrue statement or omission or alleged omission. Notwithstanding the provisions of this Section 6(d), no Underwriter shall be required to contribute any amount in excess of the amount by which the underwriting discounts and commissions applicable to the Securities purchased by such Underwriter exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of any such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(e) The obligations of the Company under this Section 6 shall be in addition to any liability which the Company may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to each person, if any, who controls the respective Underwriter within the meaning of the Securities Act; and the obligations of the respective Underwriter under this Section 6 shall be in addition to any liability that the respective Underwriter may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to each director of the Company (including any person who, with his consent, is named in the Registration Statement as about to become a director of the Company), to each officer of the Company who has signed the Registration Statement and to each person, if any, who controls the Company within the meaning of the Securities Act.

7. REPRESENTATIONS AND AGREEMENTS TO SURVIVE DELIVERY. All representations, warranties, and agreements of the Company herein or in certificates delivered pursuant hereto, including but not limited to the agreements of the Underwriters and the Company contained in Section 6 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of the Underwriters or any controlling person thereof, or the Company or any of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Securities to and by the Underwriters hereunder.

8. TERMINATION OF THIS AGREEMENT.

(a) The Underwriters shall have the right to terminate this Agreement by giving notice to the Company as hereinafter specified at any time at or prior to the Closing Date, if (i) the Company shall have failed, refused or been unable, at or prior to the Closing Date, to perform any material agreement on its part to be performed hereunder, (ii) any condition of the Underwriters' obligations hereunder is not fulfilled, (iii) trading in the Company's shares of Common Stock shall have been suspended by the Commission or NYSE MKT or trading in securities generally on the NYSE MKT shall have been suspended, (iv) minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required, on the NYSE MKT, by such Exchange, by FINRA or by order of the Commission or any other governmental authority having jurisdiction (which includes the Company's shares of Common Stock), (v) a banking moratorium shall have been declared by federal or state authorities which prevents payment by an Underwriter pursuant to Section 2, (vi) the Company is in material breach of any of its representations, warranties or covenants hereunder, (vii) the Underwriters shall have become aware, after the date hereof, of events that are reasonably expected to result in (A) a Material Adverse Change, or (B) a material adverse change in general market conditions, in each case, as would make it impracticable, in the Underwriters' reasonable judgment, to proceed with the offering and sale of the Securities, or (viii) a director of the Company (A) is charged with a felony offense relating to any financial matter arising from conduct relating to the Company, (B) becomes the subject of a public action or investigation by a governmental body arising from conduct relating to the Company (or such governmental body announces that it intends to take any such action or undertake any such investigation), or (C) is enjoined, suspended or otherwise limited from serving as a director under the federal securities laws. Any such termination shall be without liability of any party to any other party except that the provisions of Section 4(g) and Section 6 hereof shall at all times be effective and shall survive such termination.

(b) If the Underwriters elect to terminate this Agreement as provided in this Section, the Company shall be notified promptly by the Underwriters by telephone, confirmed by letter.

9. DEFAULT OF THE COMPANY. If the Company shall fail at the Closing Date or at the Option Closing Date to sell and deliver the Securities which it is obligated to sell hereunder, then this Agreement shall terminate without any liability on the part of the Underwriters or, except as provided in Section 4(g), any non-defaulting party. No action taken pursuant to this Section shall relieve the Company from liability, if any, in respect of such default.

10. NOTICES. Except as otherwise provided herein, all communications hereunder shall be in writing and, to National Securities Corporation, shall be mailed, delivered or telecopied to National Securities Corporation, 410 Park Avenue, 14<sup>th</sup> Floor, New York, NY 10022, fax (212) 380-2819 Attention: Jonathan Rich; if to the Company, shall be mailed, delivered or telecopied to it at VolitionRX Limited, 1 Scotts Road, No. 24-05 Shaw Centre, Singapore, 228208, fax +32 8172 5651, Attention: Cameron Reynolds, with a copy to Stradling Yocca Carlson & Rauth, P.C., 660 Newport Center Drive, Suite 1600, Newport Beach, CA, fax (949) 725-4100, Attention: Marc G. Alcer, which copy shall not constitute notice; or in each case to such other address as the person to be notified may have requested in writing. Any 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.

11. PERSONS ENTITLED TO BENEFIT OF AGREEMENT. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns and the controlling persons, officers and directors referred to in Section 6. Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation any legal or equitable remedy or claim under or in respect of this Agreement or any provision herein contained. The term "successors and assigns" as herein used shall not include any purchaser, as such purchaser, of any of the Securities from the Underwriters.

12. ABSENCE OF FIDUCIARY RELATIONSHIP. The Company acknowledges and agrees that: (a) the Underwriters have been retained solely to act as underwriters in connection with the sale of the Securities and that no fiduciary, advisory or agency relationship between the Company and the Underwriters has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Underwriters have advised or are advising the Company on other matters; (b) the price and other terms of the Securities set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Underwriters and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that the Underwriters and their affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Underwriters have no obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and (d) it has been advised that the Underwriters are acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of the Underwriters, and not on behalf of the Company.

13. GOVERNING LAW; CONSENT TO SERVICE OF PROCESS.

(a) This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of New York, without giving effect to conflict of laws principles thereof. The Company hereby agrees that any action, proceeding or claim against it arising out of, or relating in any way to, this Agreement shall be brought and enforced in the New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. Any such process or summons to be served upon the Company may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 10 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the Company in any action, proceeding or claim. The Company agrees that the prevailing party(ies) in any such action shall be entitled to recover from the other party(ies) all of its reasonable attorneys' fees and expenses relating to such action or proceeding and/or incurred in connection with the preparation therefore.

(b) The Company irrevocably appoints Agents and Corporations, Inc., with an address of 1201 Orange Street, Suite 600, Wilmington, Delaware 19899, as its agent for service of process in any suit, action or proceeding described in Section 13(a) hereof and agrees that service of process in any such suit, action or proceeding may be made upon it at the office of such agent. The Company waives, to the fullest extent permitted by law, any other requirements of or objections to personal jurisdiction with respect thereto. The Company represents and warrants that such agent has agreed to act as its agent for service of process, and the Company agrees to take any and all action, including the filing of any and all documents and instruments, that may be necessary to continue such appointment in full force and effect for the longer of five years or the expiration of the applicable statute of limitations.

14. COUNTERPARTS. This Agreement may be executed in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

[Signature Pages Follow]

Please sign and return to the Company the enclosed duplicates of this letter whereupon this letter will become a binding agreement between the Company and the Underwriters in accordance with its terms.

Very truly yours,  
VOLITIONRX LIMITED

By: \_\_\_\_\_  
Name:  
Title:

By: \_\_\_\_\_  
Name:  
Title:

*[Underwriting Agreement – Signature Page of the Company]*

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Confirmed as of the date first above mentioned by the Underwriters.

NATIONAL SECURITIES CORPORATION

By: \_\_\_\_\_  
Name:  
Title:

LAKE STREET CAPITAL MARKETS, LLC

By: \_\_\_\_\_  
Name:  
Title:

*[Underwriting Agreement – Signature Page of the Company]*