
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, DC 20549

FORM 8-K

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

Date of Report (Date of earliest event reported): August 16, 2017

ALTIMMUNE, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-32587
(Commission
File Number)

20-2726770
(IRS Employer
Identification No.)

19 Firstfield Road, Suite 200
Gaithersburg, Maryland
(Address of principal executive offices)

20878
(Zip Code)

Registrant's telephone number including area code: (240) 654-1450

(Former name or former address, if changed since last report)

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

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

Emerging growth company

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

Item 1.01. Entry into a Material Definitive Agreement.

On August 16, 2017, Altimmune, Inc. (the “Company”) entered into a Securities Purchase Agreement (the “Securities Purchase Agreement”), a copy of which is attached as Exhibit 2.1 to this Current Report on Form 8-K, with certain investors pursuant to which the Company agreed to sell 15,656 shares of the Company’s Series B Convertible Preferred Stock, par value \$0.0001 per share (the “Preferred Stock”) (which are initially convertible into an aggregate of 5,863,564 shares of the Company’s Common Stock, par value \$0.0001 per share (the “Common Stock”), and warrants (the “Warrants”) initially exercisable to purchase an aggregate of 2,345,427 shares of Common Stock at an exercise price of \$2.67 per share of Common Stock. The Preferred Stock and Warrants will be sold together at a price of \$940 (the “Offering”).

The Offering is expected to close on or about August 21, 2017 (the “Closing Date”), subject to the satisfaction of customary closing conditions. The gross proceeds to the Company are expected to be approximately \$14.7 million, prior to the exercise of the Warrants or redemption of the Preferred Stock, and prior to deducting placement agent fees and estimated expenses payable by the Company associated with the Offering. The Offering is being made pursuant to the Company’s existing shelf registration statement on Form S-3 (File No. 333-217034), which was filed with the U.S. Securities and Exchange Commission (the “Commission”) on March 30, 2017 and declared effective by the Commission on April 6, 2017.

The Company and its subsidiaries have agreed for so long as any Preferred Stock remains outstanding, not to enter into certain variable rate transactions, in each case, subject to certain exceptions as set forth in the Securities Purchase Agreement.

Pursuant to the terms of the Securities Purchase Agreement, the Company is required to seek stockholder approval of the issuance of the Common Stock upon conversion of the Preferred Stock or exercise of the Warrants in order to meet the requirements of Nasdaq Listing Rules 5635(b) and 5635(d) at a special or annual meeting of the Company’s stockholders to be held not later than October 31, 2017 (the “Requisite Stockholder Approval”). As previously disclosed, the Company has scheduled its 2017 annual meeting of stockholders for October 13, 2017, and the Board of Directors of the Company has set August 18, 2017 as the record date for shareholders entitled to vote at the meeting. Until the earlier of 60 days after the Company obtains the Requisite Stockholder Approval or May 1, 2018, the Company may not offer, sell or grant any shares of Common Stock or other equity, including any debt, preferred stock or other instrument convertible into shares of Common Stock or other equity of the Company.

Piper Jaffray & Co. acted as placement agent in connection with the Offering pursuant to a Placement Agency Agreement, dated August 16, 2017 (the “Placement Agency Agreement”), a copy of which is attached as Exhibit 1.1 to this Current Report on Form 8-K. Under the Placement Agency Agreement, the placement agent agreed to use “reasonable best efforts” to arrange for the sale of the Preferred Stock and related Warrants and the Company agreed to pay the placement agent a cash fee equal to 7.0% of the gross proceeds of the Offering. The Placement Agency Agreement contains customary representations, warranties and indemnification by the Company and provides for the reimbursement of up to \$150,000 in out-of-pocket fees and expenses incurred by the placement agent.

Preferred Stock

The rights, preferences and privileges of the Preferred Stock are set forth in a Certificate of Designations, Preferences and Rights of Series B Convertible Preferred Stock of the Company (the “Certificate of Designations”), a copy of which is attached as Exhibit 3.1 to this Current Report on Form 8-K. The Board of Directors of the Company (the “Board”) approved the Certificate of Designations on August 16, 2017, and the Certificate of Designations will be filed with the Delaware Secretary of State on or before the Closing Date. Each share of Preferred Stock shall have an initial stated value of \$1,000 per share.

The Preferred Stock is convertible at any time at the option of the holder into shares of Common Stock, subject to the requirements of Nasdaq Listing Rules 5635(b) and 5635(d) and the receipt by the Company of the Requisite Stockholder Approval, and certain beneficial ownership limitations as provided in the Certificate of Designations. The initial conversion price is \$2.67 per share of Common Stock. The conversion price is subject to full ratchet anti-dilution adjustment upon the issuance of equity or equity-linked securities at an effective Common Stock purchase price of less than the conversion price then in effect, subject to certain exceptions as set forth in the Certificate of Designations. Subject to the achievement of a volume weighted average price for ten consecutive trading days, and certain other conditions, in each case, as more fully set forth in the Certificate of Designations, the Company may elect to mandatorily convert all or a portion of the outstanding shares of Preferred Stock (any such portion to be pro-rated across all holders thereof) at the then prevailing conversion price.

On December 15, 2017 and the 15th day of each of the eight subsequent months thereafter (each, an “Installment Date”, and the last such Installment Date, the “Maturity Date”), the Company shall redeem approximately one-ninth (1/9th) of the Preferred Stock at the then stated value (the “Monthly Amortization Amount”), subject to certain adjustments and exceptions as set forth in the Certificate of Designations. Subject to (i) the requirements of Nasdaq Listing Rules 5635(b) and 5635(d), (ii) certain beneficial ownership limitations as provided in the Certificate of Designations and (iii) certain other conditions, including the Equity Conditions (as defined in the Certificate of Designations and described below) as provided in the Certificate of Designations, the Company may elect to pay all or any portion of the Monthly Amortization Amount in shares of Common Stock, such number of shares to be based on a price per share of Common Stock equal to the lowest of (i) the then applicable conversion price of the Preferred Stock, (ii) 85% of the arithmetic average of the three (3) lowest volume weighted average prices of the Common Stock during the ten (10) consecutive trading days prior to the applicable Installment Date and (iii) 85% of the volume weighted average price of the Common Stock on the trading day immediately prior to the Installment Date. The Company must make an election to pay in shares of Common Stock, in cash or in a combination of cash and shares by no later than the twenty-first (21st) trading day immediately prior to such Installment Date. Holders of Preferred Stock may elect to defer certain payments of Monthly Amortization Amounts, but not beyond the Maturity Date. A holder of Preferred Stock may extend the Maturity Date in certain circumstances. The issuance of Common Stock to pay the Monthly Amortization Amount is subject to the Equity Conditions defined in the Certificate of Designations, including, but not limited to, continued listing requirements, the Company’s compliance with the terms of the Certificate of Designations, the lack of occurrence of certain transactions or other Triggering Events (as defined below), and other restrictions described in more detail in the Certificate of Designations.

Upon the occurrence and continuation of certain events described in the Certificate of Designations, including but not limited to the suspension of the Company’s Common Stock from trading on The Nasdaq Global Market or another eligible exchange, the failure to sufficiently allocate shares of Common Stock, or the failure to meet other obligations under the Certificate of Designations (together with the other events described in Section 6(a) of the Certificate of Designations, a “Triggering Event”), a holder of Preferred Stock may require the Company to redeem all or a portion of its Preferred Stock at a price equal to the greater of (1) 125% of the then stated value and (2) the stated value multiplied by the ratio by which the highest closing price of the Common Stock exceeds the lowest closing price of the Common Stock during the continuation of such Triggering Event. Alternatively, during such Triggering Event, a holder may convert all or a portion of its Preferred Stock at a conversion price equal to the lowest of (i) the conversion price then in effect, (ii) 75% of the lowest volume weighted average price of the Common Stock during the twenty (20) consecutive trading days prior to such conversion and (iii) 75% of the volume weighted average price of the Common Stock on the date of such conversion.

In the event of a change of control, at the option of the holder, and as a condition to the change of control, either (i) its shares of Preferred Stock shall remain outstanding, be assumed by the successor entity or converted into securities of the successor entity (with equivalent value and rights) or (ii) shall be redeemed by the Company by payment in cash of an amount equal to the greater of (x) 125% the then stated value and (y) the stated value multiplied by the ratio by which the highest closing price of the Common Stock exceeds the lowest closing price of the Common Stock in the period after the announcement of such change of control and the date such election to be redeemed is provided.

In the event of our liquidation, dissolution, or winding up, prior to distribution to holders of securities ranking junior to the Preferred Stock, holders of Preferred Stock will be entitled to receive the amount of cash, securities or other property equal to the then stated value of the Preferred Stock.

The holders of Preferred Stock have no voting rights, except as required by law. Any amendment to our certificate of incorporation, bylaws or Certificate of Designations that adversely alters the powers, preferences and rights of the Preferred Stock requires the approval of the holders of a majority of the shares of Preferred Stock then outstanding.

The holders of Preferred Stock shall be entitled to receive dividends if and when declared by the Board. For so long as any shares of Preferred Stock are outstanding, the Board may not declare and pay any dividends on any securities ranking junior to or pari passu with the Preferred Stock unless the holders of Preferred Stock receive a dividend on a pro rata basis equal to the amount such holders would receive in such dividend if the Preferred Stock were converted to Common Stock immediately prior to such dividend.

Warrants

Each Warrant will have an exercise price of \$2.67 per share, will be immediately exercisable upon issuance and will expire on August 15, 2022. Prior to the receipt by the Company of the Requisite Stockholder Approval, exercise of a Warrant is subject to the requirements of Nasdaq Listing Rules 5635(b) and 5635(d), and certain beneficial ownership limitations as more fully described in the Warrant. The form of Warrant is attached as Exhibit 4.1 to this Current Report on Form 8-K. The exercise price and number of underlying shares of Common Stock are subject to adjustment, including full ratchet anti-dilution protection upon the issuance of any Common Stock or securities convertible into Common Stock below the then-existing exercise price.

The exercise price and number of underlying shares of Common Stock are also subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations and reclassifications and other similar events affecting the Common Stock. The Warrant may be exercised by cashless exercise or by payment of cash, at the election of the holder. The Warrants include customary Black Scholes fundamental transaction and dividend protection provisions. Except as otherwise provided in the Warrants or by virtue of such holder's ownership of shares of our Common Stock, the holder of a Warrant does not have the rights or privileges of a holder of our Common Stock, including any voting rights, until the holder exercises the Warrant.

Lockup Agreement

Each Company's executive officers and directors, aggregating approximately 43% of the Company's outstanding shares of Common Stock as of August 11, 2017, have entered into a Lockup Agreement (a "Lockup Agreement"), a copy of which is attached as Exhibit 10.1 to this Current Report on Form 8-K, pursuant to which such executive officers and directors have agreed, until the earlier of (i) the one (1) year anniversary of the Closing Date and (ii) the date the shares of Preferred Stock remain outstanding, not to (i) offer, sell, assign, transfer, pledge, contract to sell or otherwise dispose of any shares of Common Stock or other securities convertible into or exercisable or exchangeable for shares of Common Stock, (ii) enter into any swap, hedge, or other agreement or arrangement that transfers the economic risk of ownership of such securities, or (iii) engage in any short selling of any such securities, subject to certain customary exceptions, including, but not limited to, exceptions for estate planning transactions, exchanges of underwater stock options or exercises of stock options pursuant to the Company's equity compensation plans. In addition, the Company's officers and directors have waived, during the same period, any demand registration rights with respect to any such securities.

Voting Agreement

In connection with the Securities Purchase Agreement, certain of the Company's stockholders, who collectively own approximately 39% of the Company's Common Stock, entered into a voting agreement (the "Voting Agreement"), a copy of which is attached as Exhibit 10.2 to this Current Report on Form 8-K, pursuant to which such stockholders agreed to vote their shares of Common Stock in favor of the Requisite Stockholder Approval, and against any proposal or corporate action that could result in any of the Company's obligations under the Securities Purchase Agreement not being fulfilled or a breach by the Company of any covenant, representation or warrant under the Securities Purchase Agreement.

The foregoing description of the Placement Agency Agreement, the Securities Purchase Agreement, the Certificate of Designations, form of Warrant, form of Lock Up Agreement and form of Voting Agreement does not purport to be complete. The foregoing description is qualified in its entirety by reference to the Placement Agency Agreement, the Securities Purchase Agreement, the Certificate of Designations, form of Warrant, form of Lock Up Agreement and form of Voting Agreement, which are filed as Exhibits 1.1, 2.1, 3.1, 4.1, 10.1 and 10.2, respectively, to this Current Report on Form 8-K and incorporated herein by reference. Such agreements and instruments have been included to provide investors and security holders with information regarding their terms. They are not intended to provide any other factual information about the Company. The transaction documents contain certain representations, warranties and indemnifications resulting from any breach of such representations or warranties. Investors and security holders should not rely on the representations and warranties as characterizations of the actual state of facts because they were made only as of the respective dates of such documents (or as of an earlier time as specified in such agreements) and as an allocation of risk among the parties to such agreements. In addition, information concerning the subject matter of the representations and warranties may change after the respective dates of such documents, and such subsequent information may not be fully reflected in the Company's public disclosures.

Item 8.01. Other Events.

On August 17, 2017, the Company issued a press release regarding the transactions described above under Item 1.01 of this Current Report on Form 8-K. A copy of the press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit Number</u>	<u>Description</u>
1.1	Placement Agency Agreement between Altimune, Inc. and Piper Jaffray & Co.
2.1	Securities Purchase Agreement between Altimune, Inc. and the purchasers named therein (certain exhibits and schedules have been omitted, and the Company agrees to furnish supplementally to the Commission a copy of any omitted exhibits and schedules upon request)
3.1	Form of Certificate of Designations
4.1	Form of Warrant
10.1	Form of Lock Up Agreement (included as Exhibit D to Exhibit 2.1 filed hereto)
10.2	Form of Voting Agreement (included as Exhibit E to Exhibit 2.1 filed hereto)
99.1	Press Release, dated August 17, 2017

SIGNATURE

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

ALTIMMUNE, INC.

By: /s/ William Enright

Name: William Enright

Title: President and Chief Executive Officer

Dated August 17, 2017

EXHIBIT INDEX

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15,656 Series B Convertible Preferred Shares
Warrants to Purchase 2,345,427 Common Shares

ALTIMMUNE, INC.

Preferred Stock

PLACEMENT AGENCY AGREEMENT

August 16, 2017

PIPER JAFFRAY & CO.
U.S. Bancorp Center
800 Nicollet Mall
Minneapolis, Minnesota 55402

Ladies and Gentlemen:

Altimune, Inc., a Delaware corporation (the “*Company*”), proposes, subject to the terms and conditions stated in this Placement Agency Agreement (this “*Agreement*”) and the Securities Purchase Agreement in the form of Exhibit A attached hereto (the “*SPA*”) entered into with the investors identified therein (each, an “*Investor*” and collectively, the “*Investors*”), to issue and sell up to an aggregate of 15,656 shares (the “*Shares*”) of the Company’s Series B convertible preferred stock, par value \$0.0001 per share (the “*Preferred Stock*”). The shares of the Company’s common stock, par value \$0.0001 per share (the “*Common Stock*”), issuable pursuant to the conversion of the Shares are hereby referred to as the “*Conversion Shares*”. Each Investor shall also receive a warrant, in the form of Exhibit B attached to the SPA, to purchase up to a number of shares of the Company’s Common Stock (the “*Warrant Shares*”) equal to forty percent (40%) of the stated value of the Preferred Stock purchased by such Investor, at an exercise price equal to \$2.67 per share, exercisable on or after the issuance thereof and on or prior to the fifth anniversary of the issuance thereof (the “*Warrants*” and together with the Shares, the “*Securities*”). The Company hereby confirms its agreement with Piper Jaffray & Co. (the “*Placement Agent*”) as set forth below. The Securities are more fully described in the Prospectus (as defined below).

1. **Agreement to Act as Placement Agent; Delivery and Payment.** On the basis of the representations, warranties and agreements of the Company herein contained, and subject to the terms and conditions set forth in this Agreement:

(a) The Company hereby engages the Placement Agent, as agent of the Company, to, on commercially reasonable efforts basis, solicit offers to purchase Securities from the Company on the terms and subject to the conditions set forth in the Prospectus (as defined below). The Placement Agent shall use commercially reasonable efforts to assist the Company in obtaining performance by each Investor whose offer to purchase the Securities was solicited by such Placement Agent and accepted by the Company, but the Placement Agent shall not, except as otherwise provided in this Agreement, have any liability to the Company in the event any such purchase is not consummated for any reason. Under no circumstances will the Placement Agent or any of its affiliates be obligated to underwrite or purchase any of the Securities for its own account or otherwise provide any financing. The Placement Agent shall act solely as the Company’s agent and not as principal. The Placement Agent shall have no authority to bind the Company with respect to any prospective offer to purchase Securities and the Company shall

have the sole right to accept offers to purchase Securities and may reject any such offer, in whole or in part. Notwithstanding the foregoing, it is understood and agreed that the Placement Agent (or its affiliates) may, solely in its discretion and without any obligation to do so, purchase Securities as principal.

(b) As compensation for services rendered by the Placement Agent hereunder, on the Closing Date (as defined below), the Company shall pay or cause to be paid by the Investor to the Placement Agent by wire transfer of immediately available funds to an account or accounts designated by the Placement Agent, an aggregate amount equal to seven percent (7.0%) of the gross proceeds received by the Company from its sale of the Shares on such Closing Date (the “Agency Fee”). Such gross purchase price does not include any consideration that may be paid to the Company in the future upon exercise of the Warrants. The Placement Agent agrees that the foregoing compensation, together with any expense reimbursement payable hereunder, constitutes all of the cash compensation that such Placement Agent shall be entitled to receive in connection with the Offering contemplated hereby and supersedes any compensation that may have been payable pursuant to the letter agreement, dated January 23, 2017, between the Company and the Placement Agent (the “Engagement Letter”).

(c) The Securities are being sold to the Investors at a price of \$1,000 per Share with 6.0% original issue discount and accompanying Warrant (the “Purchase Price”) as set forth on the cover page of the Prospectus (as defined below). The purchases of Securities by the Investors shall be evidenced by the execution of the SPA by each of the parties thereto in the form attached hereto as Exhibit A.

(d) Prior to the earlier of (i) the date on which this Agreement is terminated and (ii) the Closing Date, the Company shall not, without the prior written consent of the Placement Agent, solicit or accept offers to purchase Securities of the Company (other than pursuant to the exercise of options or warrants to purchase shares of Common Stock that are outstanding at the date hereof) otherwise than through the Placement Agent in accordance herewith.

(e) No Securities which the Company has agreed to sell pursuant to this Agreement and the SPA shall be deemed to have been purchased and paid for, or sold by the Company, until such Securities shall have been delivered to the Investor purchasing such Securities against payment therefor by such Investor. If the Company shall default in its obligations to deliver Securities to an Investor whose offer it has accepted, the Company shall indemnify and hold the Placement Agent harmless against any loss, claim, damage or liability directly or indirectly arising from or as a result of such default by the Company in accordance with the procedures set forth in Section 6(c) hereof.

(f) Payment of the purchase price for, and delivery of the Securities shall be made at a closing (the “Closing”) at the offices of Proskauer Rose LLP, One International Place, Boston, MA, at 10:00 a.m., local time, on August 21, 2017 or at such other time and date as the Placement Agent and the Company determine pursuant to Rule 15c6-1(a) under the Securities Exchange Act of 1934, as amended (the “1934 Act”) (such date of payment and delivery being herein referred to as the “Closing Date”). The Shares and the Warrants will be issued in certificated form. The payment of the purchase price for the Securities shall be paid to the Company by Federal Funds wire transfer from an escrow account of Proskauer Rose LLP, pursuant to the terms of that Direction Letter between the Company and Proskauer Rose LLP dated as of the date hereof, in each case, against delivery of the Securities to such persons and shall be registered in the name or names and shall be in such denominations as the Placement Agent may request at least one business day before the Closing Date.

2. Representations and Warranties of the Company. The Company represents and warrants to the Placement Agent as of the date hereof, and as of the Closing Date and agrees with the Placement Agent, as follows:

(a) *Shelf Registration Statement.*

(i) The Company has prepared and filed in conformity with the requirements of the Securities Act of 1933, as amended (the “1933 Act”), and the published rules and regulations thereunder (the “Rules and Regulations”) adopted by the Securities and Exchange Commission (the “SEC”) a “shelf” registration statement on Form S-3 (No. 333-217034), which became effective on April 6, 2017, including a base prospectus (the “Base Prospectus”), relating to Common Stock, preferred stock or warrants of the Company that may be sold from time to time by the Company, in accordance with Rule 415 of the 1933 Act, and such amendments thereof as may have been required to the date of this Agreement. The term “Registration Statement” as used in this Agreement means such registration statement, including all exhibits, financial schedules and all documents and information deemed to be part of the Registration Statement by incorporation by reference or otherwise, as amended from time to time, including the information (if any) contained in the form of final prospectus filed with the SEC pursuant to Rule 424(b) of the Rules and Regulations and deemed to be part thereof at the time of effectiveness pursuant to Rules 430A and 430B of the Rules and Regulations. The term “Prospectus” means the Base Prospectus, and any amendments or further supplements to such prospectus filed with the SEC, and including, without limitation, the final prospectus supplement (the “Prospectus Supplement”), filed pursuant to and within the limits described in Rule 424(b) with the SEC in connection with the proposed sale of the Securities contemplated by this Agreement and the SPA through the date of such prospectus supplement. Unless otherwise stated herein, any reference herein to the Registration Statement and the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein, including pursuant to Item 12 of Form S-3 under the 1933 Act, which were filed under the 1934 Act, on or before the date hereof or are so filed hereafter. Any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include any such document filed or to be filed under the 1934 Act after the date of the Registration Statement or Prospectus, as the case may be, and deemed to be incorporated therein by reference.

(ii) The Company was at the time of the filing of the Registration Statement eligible to use Form S-3. As of the date of this Agreement, the Company is eligible to use Form S-3 under the 1933 Act and it meets the transaction requirements with respect General Instruction I.B.1 of Form S-3. The Company filed with the SEC the Registration Statement on such Form S-3, including a Base Prospectus, for registration under the 1933 Act of the offering and sale of the Securities. When the Registration Statement or any amendment thereof or supplement thereto was or is declared effective and as of the date of the most recent amendment to the Registration Statement, it (i) complied or will comply, in all material respects, with the requirements of the 1933 Act and the Rules and Regulations and the 1934 Act and the rules and regulations of the SEC thereunder and (ii) did not or will not, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements

therein not misleading. When any Statutory Prospectus or Prospectus was first filed with the SEC (whether filed as part of the Registration Statement or any amendment thereto or pursuant to Rule 424 of the Rules) and when any amendment thereof or supplement thereto was first filed with the SEC, such Statutory Prospectus or Prospectus as amended or supplemented complied in all material respects with the applicable provisions of the 1933 Act and the Rules and Regulations and did not or will not, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein not misleading. Notwithstanding the forgoing, the Company makes no representations or warranties as to information contained in or omitted from any Statutory Prospectus or Prospectus, in reliance upon, and in conformity with, written information furnished to the Company by or on behalf of the Placement Agent, specifically for use therein, which information the parties hereto agree is limited to the Placement Agent's Information (as defined in Section 7 hereof).

(b) *Prospectus*. As of the Applicable Time (as defined below) and as of the Closing Date, neither (x) the Disclosure Package, nor (y) any individual Limited Use Free Writing Prospectus (as defined below), when considered together with the Disclosure Package, included, includes or will include any untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. As used in this subsection and elsewhere in this Agreement:

(1) "*Applicable Time*" means 5:30 p.m. (New York time) on the date of this Agreement or such other time as agreed to by the Company and the Investors.

(2) "*Disclosure Package*" means (i) the Statutory Prospectus, (ii) each General Use Free Writing Prospectus, if any, filed or used by the Company on or before the effectiveness of the Registration Statement (other than a roadshow that is an General Use Free Writing Prospectus but is not required to be filed under Rule 433 of the Rules and Regulations) and (iii) the pricing and other information as set forth on Exhibit F hereto, all considered together.

(3) "*Issuer Free Writing Prospectus*" means any "issuer free writing prospectus," as defined in Rule 433 under the 1933 Act, relating to the Securities in the form filed or required to be filed with the SEC or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g) under the 1933 Act.

(4) "*General Use Free Writing Prospectus*" means any Issuer Free Writing Prospectus that is identified on Schedule I to this Agreement.

(5) "*Limited Use Free Writing Prospectus*" means any Issuer Free Writing Prospectus that is not a General Use Free Writing Prospectus.

(6) "*Statutory Prospectus*" means the preliminary prospectus, if any, and the Base Prospectus, each as amended and supplemented immediately prior to the Time of Sale, including any document incorporated by reference therein and any prospectus supplement deemed to be a part thereof.

(c) *Organization*. The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the State of Delaware, with corporate power and authority to own or lease its properties and conduct its business as described in the Registration

Statement, the Disclosure Package and the Prospectus. The Company has no significant subsidiaries (as such term is defined in Rule 1-02 of Regulation S-X promulgated by the SEC) other than as listed on Schedule 2(c) hereto (collectively, the “*Subsidiaries*”). Each of the Subsidiaries has been duly organized and is validly existing as an entity in good standing under the laws of the jurisdiction of its organization, with corporate power and authority to own or lease its properties and conduct its business as described in the Registration Statement, the Disclosure Package and the Prospectus. The Company and each of the Subsidiaries are duly qualified to transact business in all jurisdictions in which the conduct of their business requires such qualification, except where the failure to be so qualified would not reasonably be expected to result in a Material Adverse Effect. For purposes of this Agreement, “*Material Adverse Effect*” shall mean any event or occurrence that has a material adverse effect on (i) the business, properties, assets, liabilities, operations, results of operations, condition (financial or otherwise) or prospects of the Company and of the Subsidiaries, individually or taken as a whole, whether or not occurring in the ordinary course of business, (ii) on the authority or ability of the Company to perform its obligations under the Transaction Documents (as defined below) or (iii) the legality, validity, binding effect or enforceability of any of the Transaction Documents; provided that none of the following shall be taken into account in determining whether a Material Adverse Effect has occurred: (1) events or occurrences generally affecting the economy or the debt, credit or securities markets, (2) any acts of God, national disaster, or outbreak or escalation of hostilities or declared or undeclared acts of war or terrorism, (3) changes in laws or regulations, (4) changes in United States generally accepted principles of accounting consistently applied throughout the periods involved (“*GAAP*”) (or interpretations thereof) or (5) events or occurrences generally affecting the industry in which the Company conducts its business, except, in each case, to the extent such events or occurrences have a disproportionate impact on the Company and its Subsidiaries, taken as a whole. The outstanding shares of capital stock of each of the Subsidiaries have been duly authorized and validly issued, are fully paid and non-assessable and are owned by the Company or another Subsidiary free and clear of all liens, encumbrances and equities and claims, except as described in the Registration Statement, the Disclosure Package and the Prospectus; and no options, warrants or other rights to purchase, agreements or other obligations to issue or other rights to convert any obligations into shares of capital stock or ownership interests in the Subsidiaries are outstanding.

(d) *Authorization; Enforcement; Validity.* The Company has the requisite corporate power and authority to enter into and perform its obligations under this Agreement, the SPA, the certificate of designations setting forth the terms of the Preferred Shares (the “*Certificate of Designations*”), the Warrants, the Irrevocable Transfer Agent Instructions (as defined in SPA), the Lock-Up Agreements (as defined in Section 2(y)), the Voting Agreement (as defined in the SPA) and each of the other agreements entered into by the parties hereto and the Investors in connection with the transactions contemplated by this Agreement and the SPA (collectively, the “*Transaction Documents*”) and to issue the Securities in accordance with the terms hereof and thereof. The execution and delivery of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby, including, without limitation, the issuance of the Shares and the Warrants, the reservation for issuance and the issuance of the Conversion Shares issuable pursuant to the terms of the Certificate of Designations and the reservation for issuance and the issuance of the Warrant Shares issuable upon exercise of the Warrants have been duly authorized by the Company’s Board of Directors, and, except as expressly set forth in the Transaction Documents, no further filing, consent, or authorization is required by the Company’s Board of Directors or its stockholders. This Agreement and the other Transaction Documents have been duly executed and delivered by the Company, and constitute the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their respective terms, except as such enforceability may

be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies. As of immediately prior to the Closing, the Certificate of Designations in the form attached hereto as Exhibit C has been filed with the Secretary of State of the State of Delaware and is in full force and effect, enforceable against the Company in accordance with its terms and has not been amended.

(e) *Issuance of Securities.* The outstanding shares of Common Stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable; the Securities to be issued and sold by the Company have been duly authorized and when issued and paid for as contemplated herein in accordance with the terms of the Transaction Documents will be free from all taxes, liens and charges with respect to the issue thereof, validly issued, fully paid and non-assessable; and no preemptive rights of stockholders exist with respect to any of the Securities or the issue and sale thereof. A number of shares of Common Stock shall have initially been duly authorized and reserved for issuance which equals at least 150% of the maximum number of shares of Common Stock issuable (i) pursuant to the terms of the Certificate of Designations (without taking into account any limitations on the conversion or redemption of the Shares set forth in the Certificate of Designations) and (ii) upon exercise of the Warrants (without taking into account any limitations on the exercise of the Warrants set forth in the Warrants) (150% of such aggregate number of shares in clauses (i) and (ii), the "Required Reserve Amount"). Except as expressly contemplated by the Transaction Documents, neither the filing of the Registration Statement nor the offering or sale of the Securities as contemplated by this Agreement and the SPA gives rise to any rights, other than those which have been waived or satisfied, for or relating to the registration of any shares of Common Stock. Upon issuance pursuant to the terms of the Certificate of Designations or exercise in accordance with the Warrants, as the case may be, the Conversion Shares and Warrant Shares, respectively, will be validly issued, fully paid and nonassessable and free from all preemptive or similar rights, taxes, liens and charges with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock.

(f) *Equity Capitalization.* As of the date hereof and as of the Closing Date, the Company has or will have, as the case may be, an authorized, issued and outstanding capitalization as is set forth in the Registration Statement, the Disclosure Package and the Prospectus (subject, in each case, to the issuance of shares of Common Stock upon exercise of stock options and warrants disclosed as outstanding in the Registration Statement, the Disclosure Package and the Prospectus and the grant or issuance of options or shares under existing equity compensation plans or stock purchase plans described in the Registration Statement, the Disclosure Package or the Prospectus), and such authorized capital stock conforms to the description thereof set forth in the Registration Statement, the Disclosure Package and the Prospectus. All of the Securities conform to the description thereof contained in the Registration Statement, the Disclosure Package and the Prospectus. The form of certificates for the Shares, the Conversion Shares, the Warrants and the Warrant Shares, as applicable, will conform to the corporate law of the jurisdiction of the Company's incorporation. As of the date hereof, immediately prior to the transactions contemplated by this Agreement and the other Transaction Documents, the authorized capital stock of the Company consists of (1) 100,000,000 shares of Common Stock, of which 15,422,913 shares are issued and outstanding, 2,705,307 shares are reserved for issuance pursuant to the Company's stock option and purchase plans and 4,658 shares are reserved for issuance pursuant to securities (other than the aforementioned options and the Warrants) exercisable or exchangeable for, or convertible into, Common Stock, and (2) 1,000,000 shares of preferred stock, par value \$0.0001 per share, none of which are issued and outstanding. All of such outstanding shares have been, or upon issuance will be, validly issued

and are fully paid and nonassessable. Except as disclosed on Schedule 2(f) hereto or as expressly contemplated by the Transaction Documents, (i) none of the Company's capital stock is subject to preemptive rights or any other similar rights or any liens or encumbrances suffered or permitted by the Company; (ii) there are no outstanding options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, or exercisable or exchangeable for, any shares of capital stock of the Company or any of its Subsidiaries, or contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to issue additional shares of capital stock of the Company or any of its Subsidiaries or options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, or exercisable or exchangeable for, any shares of capital stock of the Company or any of its Subsidiaries; (iii) there are no agreements or arrangements under which the Company or any of its Subsidiaries is obligated to register the sale of any of their securities under the 1933 Act; (iv) there are no outstanding securities or instruments of the Company or any of its Subsidiaries which contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to redeem a security of the Company or any of its Subsidiaries; (v) there are no securities or instruments binding on the Company or any of its Subsidiaries containing anti-dilution or similar provisions that will be triggered by the issuance of the Securities; (vi) the Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement; and (vii) the Company and its Subsidiaries have no liabilities or obligations required to be disclosed in the SEC Documents (as defined in Section 2(w)) but not so disclosed in the SEC Documents, other than those incurred in the ordinary course of the Company's or any of its Subsidiaries' respective businesses and which, individually or in the aggregate, do not or would not have a Material Adverse Effect. Schedule 2(f) sets forth the material terms of any outstanding warrants of the Company, including, without limitation, the exercise price, put rights or other special features and expiration date thereof.

(g) *Disclosure.*

(i) The SEC has not issued an order preventing or suspending the use of any Issuer Free Writing Prospectus or the Statutory Prospectus or Prospectus relating to the proposed offering of the Securities, and no proceeding for that purpose or pursuant to Section 8A of the 1933 Act has been instituted or, to the Company's knowledge, threatened by the SEC. The Registration Statement conforms, and the Statutory Prospectus and the Prospectus and any amendments or supplements thereto will conform to the requirements of the 1933 Act and the Rules and Regulations. The documents incorporated, or to be incorporated, by reference in the Statutory Prospectus and Prospectus, at the time filed with the SEC conformed in all material respects, or will conform in all respects, to the requirements of the 1934 Act or the 1933 Act, as applicable, and the Rules and Regulations. The Registration Statement and any amendments and supplements thereto do not contain, and on the Closing Date will not contain, any untrue statement of a material fact and do not omit, and on the Closing Date will not omit, to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Statutory Prospectus and Prospectus and any amendments and supplements thereto do not contain, and on the Closing Date will not contain, any untrue statement of a material fact; and do not omit, and on the Closing Date will not omit, to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(ii) Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Securities or until any earlier date that the Company notified or notifies the Investors as described in the next sentence, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Disclosure Package or the Prospectus, including any document incorporated by reference therein that has not been superseded or modified. 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 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 light of the circumstances, not misleading, the Company has notified or will notify promptly the Investors so that any use of such Issuer Free Writing Prospectus may cease until it is amended or supplemented.

(iii) The Company confirms that neither it nor any other Person acting on its behalf has provided any of the Investors or their agents or counsel with any information that constitutes or would reasonably be expected to constitute material, nonpublic information concerning the Company or any of its Subsidiaries that will not be included in the 8-K Filing (as defined in the SPA). The Company understands and confirms that the Placement Agent will rely on the foregoing representations in acting as placement agent in connection with the issuance of the Securities. Each press release issued by the Company or any of its Subsidiaries during the twelve (12) months preceding the date hereof did not at the time of release contain any untrue statement of material fact or omit to state a material fact required to be stated therein or necessary in order to make such statements therein, in the light of the circumstances in which they were made, not misleading. The Company does not have any agreement or understanding with any Investor with respect to the transactions contemplated by the Transaction Documents other than as specified in the Transaction Documents. For the purpose of this Agreement, “Person” means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization and a government or any department or agency thereof.

(h) *Offering Materials.* The Company has not, directly or indirectly, distributed and will not distribute any offering material in connection with the offering and sale of the Securities other than the Statutory Prospectus, the Prospectus, any Issuer Free Writing Prospectus and other materials, if any, permitted under the 1933 Act. The Company will file with the SEC all Issuer Free Writing Prospectuses in the time required under Rule 433(d) under the 1933 Act. The Company has satisfied or will satisfy the conditions in Rule 433 under the 1933 Act to avoid a requirement to file with the SEC any electronic road show.

(i) *Ineligible Issuer Status.* At the time of filing (i) the Registration Statement and (ii) as of the date hereof (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an “ineligible issuer” (as defined in Rule 405 under the 1933 Act, without taking into account any determination by the SEC pursuant to Rule 405 under the 1933 Act that it is not necessary that the Company be considered an ineligible issuer), including, without limitation, for purposes of Rules 164 and 433 under the 1933 Act with respect to the offering of the Securities as contemplated by the Registration Statement.

(j) *Financial Statements.* The consolidated financial statements of the Company and the Subsidiaries, together with related notes and schedules as set forth or incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus, present fairly

in all material respects the financial position of the Company and the consolidated Subsidiaries and the results of operations and cash flows of the Company and the consolidated Subsidiaries, at the indicated dates and for the indicated periods. Such consolidated financial statements and related schedules have been prepared in accordance with GAAP, except as disclosed therein, and all adjustments necessary for a fair presentation of results for such periods have been made. The summary and selected consolidated financial and statistical data included or incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus presents fairly in all material respects the information shown therein, at the indicated dates and for the indicated periods, and such data has been compiled on a basis consistent with the financial statements presented therein and the books and records of the Company. All disclosures, if any, contained in the Registration Statement, the Disclosure Package and the Prospectus regarding “non-GAAP financial measures” (as such term is defined by the Rules and Regulations) comply in all material respects with Regulation G of the 1934 Act and Item 10 of Regulation S-K under the 1933 Act, to the extent applicable. The Company and the Subsidiaries do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations or any “variable interest entities” within the meaning of Financial Accounting Standards Board Interpretation No. 46), not disclosed in the Registration Statement, the Disclosure Package and the Prospectus. There are no financial statements (historical or pro forma) that are required to be included in the Registration Statement, the Disclosure Package or the Prospectus that are not included as required.

(k) *Accountants.* Each of Ernst & Young LLP, BDO USA, LLP and BDO LLP, who have certified certain of the financial statements filed with the SEC as part of, or incorporated by reference in, the Registration Statement, the Disclosure Package and the Prospectus, has represented to the Company that it is an independent registered public accounting firm with respect to the Company and the Subsidiaries within the meaning of the 1933 Act and the applicable Rules and Regulations and the Public Company Accounting Oversight Board (United States) (the “PCAOB”).

(l) *Weaknesses or Changes in Internal Accounting Controls.* Neither the Company nor any of the Subsidiaries is aware of (i) any material weakness in its internal control over financial reporting or (ii) change in internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

(m) *Sarbanes-Oxley.* Solely to the extent that the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated by the SEC and The NASDAQ Global Market (the “Principal Market”), if applicable, thereunder (collectively, the “Sarbanes-Oxley Act”) has been applicable to the Company, there is and has been no failure on the part of the Company to comply in all respects with any provision of the Sarbanes-Oxley Act. The Company has taken all necessary actions to ensure that it is in compliance in all respects with all provisions of the Sarbanes-Oxley Act that are in effect with respect to which the Company is required to comply and is actively taking steps to ensure that it will be in compliance with the other provisions of the Sarbanes-Oxley Act which will become applicable to the Company.

(n) *Litigation.* There is no action, suit, claim or proceeding pending or, to the knowledge of the Company, threatened against the Company or any of the Subsidiaries before any court or administrative agency or otherwise which if determined adversely to the Company or any of the Subsidiaries would have, individually or in the aggregate, a Material Adverse Effect, except as set forth in the Registration Statement, the Disclosure Package and the Prospectus.

(o) *Title.* The Company and the Subsidiaries have good and marketable title to all of the material properties and assets reflected in the consolidated financial statements hereinabove described or described in the Registration Statement, the Disclosure Package and the Prospectus, subject to no lien, mortgage, pledge, charge or encumbrance of any kind except those reflected in such financial statements or described in the Registration Statement, the Disclosure Package and the Prospectus or which are not material in amount or would not materially interfere with the use to be made of such properties or assets. The Company and the Subsidiaries occupy their leased properties under valid and binding leases conforming in all material respects to the description thereof set forth in the Registration Statement, the Disclosure Package and the Prospectus.

(p) *Tax Status.* The Company and each of its Subsidiaries (i) has timely made or filed all material foreign, federal and state income tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has timely paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations, except those being contested in good faith and (iii) has set aside on its books provision reasonably adequate for the payment of all taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company and its Subsidiaries know of no basis for any such claim.

(q) *Absence of Certain Changes.* Since the respective dates as of which information is given in the Registration Statement, the Disclosure Package and the Prospectus, as each may be amended or supplemented, there has not been any Material Adverse Effect and there has not been any material transaction entered into by the Company or the Subsidiaries, including, without limitation, (i) declaration or payment of any dividends, (ii) sale of any assets, individually or in the aggregate, in excess of \$250,000 or (iii) any capital expenditures, individually or in the aggregate, in excess of \$250,000, other than transactions in the ordinary course of business and transactions described in the Registration Statement, the Disclosure Package and the Prospectus, as each may be amended or supplemented. The Company and the Subsidiaries have no material contingent obligations which are not disclosed in the Company's consolidated financial statements which are included in the Registration Statement, the Disclosure Package and the Prospectus. Neither the Company nor any of its Subsidiaries has taken any steps to seek protection pursuant to any bankruptcy law nor does the Company have any knowledge or reason to believe that its creditors intend to initiate involuntary bankruptcy proceedings or any actual knowledge of any fact that would reasonably lead a creditor to do so. The Company and its Subsidiaries, individually and on a consolidated basis, are not as of the date hereof, and after giving effect to the transactions contemplated hereby to occur, and as at the Closing, will not be Insolvent (as defined below). For purposes of this Agreement, "*Insolvent*" means, with respect to any Person, (i) the present fair saleable value of such Person's assets is less than the amount required to pay such Person's total Indebtedness (as defined in Section 2(zz)), (ii) such Person is unable to pay its debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured, or (iii) such Person intends to incur or believes that it will incur debts that would be beyond its ability to pay as such debts mature.

(r) *No Conflicts.* Neither the Company nor any of the Subsidiaries is, or with the giving of notice or lapse of time or both, will be after giving effect to the execution, delivery and performance of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Securities), (i) in violation of its certificate of incorporation, by-laws, any certificate of designations or other organizational documents or (ii) in violation of or in default (or an event which with notice or lapse of time or both would become a default) in any respect

under, or give to others any rights of termination, amendment, acceleration or cancellation of under any agreement, indenture, mortgage, deed of trust, lease, contract, indenture or other agreement or instrument or obligation to which the Company or any Subsidiary is a party or by which the Company or any Subsidiary, or any of their respective properties, is bound or (iii) in violation of any law, rule, regulation, order, judgment, writ or decree of any court applicable to the Company or any of its Subsidiaries or by which any property or asset of the Company or any of its Subsidiaries is bound or affected or of any government, regulatory body or administrative agency or other governmental body having jurisdiction over the Company or any of its Subsidiaries (including U.S. federal and state securities laws and regulations and the rules and regulations of the Principal Market applicable to the Company or any of its Subsidiaries), except in the case of clauses (ii) and (iii), for such violations, conflicts, breaches or defaults which would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(s) *Contracts.* There is no document, contract or other agreement required to be described in the Registration Statement, the Disclosure Package or Prospectus or to be filed as an exhibit to the Registration Statement which is not described or filed as required by the 1933 Act or the Rules and Regulations. Each description of a contract, document or other agreement in the Registration Statement, the Disclosure Package and the Prospectus accurately reflects in all material respects the terms of the underlying contract, document or other agreement. Each contract, document or other agreement described in the Registration Statement, the Disclosure Package and Prospectus or listed in the exhibits to the Registration Statement or incorporated by reference is in full force and effect and is valid and enforceable by and against the Company in accordance with its terms (except as rights to indemnity and contribution thereunder may be limited by federal or state securities laws and matter of public policy and except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and by general equitable principle). Neither the Company nor any of its Subsidiaries nor, to the Company's knowledge, any other party is in default in the observance or performance of any term or obligation to be performed by it under any such agreement or any other agreement or instrument to which the Company or its Subsidiaries is a party or by which the Company or its Subsidiaries or their respective properties or businesses may be bound, and no event has occurred which with notice or lapse of time or both would constitute such a default, in any such case in which the default, non-performance or event, individually or in the aggregate, would have a Material Adverse Effect.

(t) *Regulatory Approvals.* Each approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body necessary in connection with the execution and delivery by the Company of this Agreement and the consummation of the transactions herein contemplated (except such additional steps as may be required by the SEC, the Financial Industry Regulatory Authority, Inc. (the "FINRA") or such additional steps as may be required under state securities or Blue Sky laws) has been obtained or made and is in full force and effect.

(u) *Conduct of Business.* Neither the Company nor any of its Subsidiaries is in violation of any term of or in default under its Certificate of Incorporation, any certificate of designations, preferences or rights of any other outstanding series of preferred stock of the Company or any of its Subsidiaries or bylaws or their organizational charter, certificate of formation or certificate of incorporation or bylaws, respectively. Neither the Company nor any of its Subsidiaries is in violation of any judgment, decree or order or any statute, ordinance, rule or regulation applicable to the Company or its Subsidiaries, except in all cases for possible violations which could not, individually or in the aggregate, reasonably be expected to have a

Material Adverse Effect. The Company has satisfied all eligibility requirements necessary to enable its Common Stock to be listed or quoted on one or more Eligible Markets (as defined in the Warrants). During the two (2) years prior to the date hereof, (i) the Common Stock has been listed or designated for quotation on the Principal Market or another Eligible Market, (ii) trading in the Common Stock has not been suspended by the SEC or the Principal Market and (iii) the Company has received no communication, written or oral, from the SEC or the Principal Market (or other Eligible Market on which the Common Stock was previously listed) regarding the suspension or delisting of the Common Stock from such Principal Market or other Eligible Market. The Company and its Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct their respective businesses, except where the failure to possess such certificates, authorizations or permits would not have, individually or in the aggregate, a Material Adverse Effect, and neither the Company nor any such Subsidiary has received any written notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit. Without limiting the generality of the foregoing, neither the Company nor any of its Subsidiaries is in violation of any of the rules, regulations or requirements of the Principal Market and has no knowledge of any facts or circumstances that would reasonably lead to delisting or suspension of the Common Stock by the Principal Market.

(v) *Intellectual Property*. Except as described in the Registration Statement, the Disclosure Package and the Prospectus or in any document incorporated by reference therein or as would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect: (i) the Company and each of the Subsidiaries hold all material licenses, certificates and permits from governmental authorities which are necessary for and material to the conduct of their businesses in the manner in which they are currently being conducted; (ii) the Company and the Subsidiaries each own or possess the right to use all patents, patent rights, trademarks, trade names, service marks, service names, copyrights, know-how (including trade secrets and other unpatented and unpatentable proprietary or confidential information, systems or procedures) and other intellectual property rights ("*Intellectual Property*") necessary to carry on their business in all material respects in the manner in which it is being currently conducted; and (iii) none of the Company's or its Subsidiaries' Intellectual Property that is necessary to carry on their business in the manner in which it is being currently conducted has expired, terminated or been abandoned or are expected to expire, terminate or be abandoned, within three years from the date of this Agreement. The Company has taken commercially reasonable steps to secure ownership interests in Intellectual Property created for it by any contractors. There are no outstanding options, licenses or agreements of any kind relating to the Intellectual Property of the Company that are required to be described in the Registration Statement, the Disclosure Package and the Prospectus and are not described therein in all material respects. The Company is not a party to or bound by any options, licenses or agreements with respect to the Intellectual Property of any other person or entity that are required to be set forth in the Registration Statement, the Statutory Prospectus or the Prospectus and are not described therein in all material respects. Except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, (x) none of the Intellectual Property used by the Company and necessary to the Company's business as currently conducted has been obtained or is being used by the Company in violation of any contractual obligation binding on the Company or, to the Company's knowledge, any of its officers, directors or employees or, to the Company's knowledge, otherwise in violation of the rights of any persons; to (y) the Company's knowledge, neither the Company nor any of the Subsidiaries has infringed any Intellectual Property rights of any other person or entity; and (z) the Company has not received any written communications alleging that the Company has violated, infringed or conflicted with any of the Intellectual Property of any other person or entity. The Company knows of no infringement by others of

Intellectual Property owned or licensed by the Company and which is necessary for and material to its business as currently conducted. The Company and each of its Subsidiaries have taken commercially reasonable measures to protect the secrecy and confidentiality of their Intellectual Property.

(w) *Manipulation of Prices.* The Company has not, and to its knowledge no one acting on its behalf has, (i) taken or may take, directly or indirectly, any action designed to cause or to result, or that would reasonably be expected to cause or result, in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) other than the Placement Agent, sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the Securities, or (iii) other than the Placement Agent, paid or agreed to pay to any person any compensation for soliciting another to purchase any other securities of the Company.

(x) *Investment Company Act.* Neither the Company nor any of its Subsidiaries is, and upon consummation of the sale of the Securities, will not be, an “investment company,” an affiliate of an “investment company,” a company controlled by an “investment company” or an “affiliated person” of, or “promoter” or “principal underwriter” for, an “investment company” as such terms are defined in the Investment Company Act of 1940, as amended (the “*Investment Company Act*”).

(y) *Internal Accounting Controls.*

(i) The Company and each of the Subsidiaries 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 and liabilities; (iii) access to assets or incurrence of liabilities is permitted only in accordance with management’s general or specific authorization; and (iv) the recorded accountability for assets and liabilities is compared with existing assets and liabilities at reasonable intervals and appropriate action is taken with respect to any differences.

(ii) The Company has established and maintains “disclosure controls and procedures” (as defined in Rules 13a-15(e) and 15d-15(e) under the 1934 Act); the Company’s “disclosure controls and procedures” are effective in ensuring that all information (both financial and non-financial) required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, 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 1934 Act is accumulated and communicated to the Company’s management, including its principal executive officer or officers and its principal financial officer or officers, as appropriate, to allow timely decisions regarding required disclosure. During the twelve months prior to the date hereof neither the Company nor any of its Subsidiaries has received any notice or correspondence from any accountant relating to any material weakness in any part of the system of internal accounting controls of the Company or any of its Subsidiaries.

(z) *Industry and Market Data.* The statistical, industry-related and market-related data included in the Registration Statement, the Disclosure Package and the Prospectus are based on or derived from sources which the Company reasonably and in good faith believes are reliable and accurate, and such data agree in all material respects with the sources from which they are derived.

(aa) *Compliance with Anti-Money Laundering Laws.* The operations of the Company and its Subsidiaries are and have been conducted at all times in material compliance with applicable financial recordkeeping and reporting requirements and all other applicable U.S. and non-U.S. anti-money laundering laws and regulations, including, but not limited to, those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the USA Patriot Act of 2001 and the applicable money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “*Anti-Money Laundering Laws*”), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its Subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(bb) *No Conflicts with Sanctions Laws.* Neither the Company nor any of the Subsidiaries has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law which violation is required to be disclosed in the Registration Statement, the Disclosure Package or the Prospectus. Neither the Company nor any of its Subsidiaries, nor any director, officer, employee or affiliate, nor, to the Company’s knowledge, any agent or other person associated with or acting on behalf of the Company or any of its Subsidiaries or affiliates is, or is directly or indirectly owned or controlled by, a Person that is currently the subject or the target of any sanctions administered or enforced by the U.S. government (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury (“*OFAC*”) or the U.S. Departments of State or Commerce and including, without limitation, the designation as a “specially designated national” or “blocked person”), the United Nations Security Council (“*UNSC*”), the European Union, Her Majesty’s Treasury (“*HMT*”) or any other relevant sanctions authority (collectively, “*Sanctions*”). Neither the Company nor any of its Subsidiaries are located, organized or resident in a country or territory that is the subject or target of a comprehensive embargo or Sanctions prohibiting trade with the country or territory, including, without limitation, Crimea, Cuba, Iran, North Korea, Sudan and Syria (each, a “*Sanctioned Country*”). No action of the Company or any of its Subsidiaries in connection with (i) the execution, delivery and performance of this Agreement and the other Transaction Documents, (ii) the issuance and sale of the Securities or (iii) the direct or indirect use of proceeds from the Securities or the consummation of any other transaction contemplated hereby or by the other Transaction Documents or the fulfillment of the terms hereof or thereof, will result in the proceeds of the transactions contemplated hereby and by the other Transaction Documents being used, or loaned, contributed or otherwise made available, directly or indirectly, to any Subsidiary, joint venture partner or other person or entity, for the purpose of (1) unlawfully funding or facilitating any activities of or business with any person that, at the time of such funding or facilitation, is the subject or target of Sanctions, (2) unlawfully funding or facilitating any activities of or business in any Sanctioned Country or (3) in any other manner that will result in a violation by any Person (including any Person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. For the past five years, the Company and its Subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(cc) *Anti-Bribery*. Neither the Company, nor any of its Subsidiaries or affiliates, nor any director, officer, agent, employee or other person associated with or acting on behalf of the Company, or any of its Subsidiaries or affiliates (in each case, in such capacity), has (i) used any funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity, (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee, to any employee or agent of a private entity with which the Company does or seeks to do business (a "*Private Sector Counterparty*") or to foreign or domestic political parties or campaigns from corporate funds, (iii) violated or is in violation of any provision of any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions or any applicable provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "*FCPA*"), the U.K. Bribery Act 2010, or any other similar law of any other jurisdiction in which the Company operates its business, including, in each case, the rules and regulations thereunder, (iv) taken or is currently taking any action in furtherance of an offer, payment, gift or anything else of value, directly or indirectly, to any person while knowing that all or some portion of the money or value will be offered, given or promised to anyone to improperly influence official action, to obtain or retain business or otherwise to secure any improper advantage or (v) otherwise made any bribe, rebate, payoff, influence payment, unlawful kickback or other unlawful payment; the Company and each of its respective Subsidiaries has instituted and has maintained policies and procedures reasonably designed to promote and achieve compliance with the laws referred to in (iii) above. No action of the Company or any of its Subsidiaries in connection with the direct or indirect use of proceeds from the Securities or the consummation of any other transaction contemplated hereby or by the other Transaction Documents or the fulfillment of the terms hereof or thereof, will result in the proceeds of the transactions contemplated hereby and by the other Transaction Documents being used to for the purpose of financing or facilitating any activity that would violate the laws and regulations referred to in (iii) above.

(dd) *Insurance*. The Company and each of the Subsidiaries carry, or are covered by, insurance by insurers of recognized financial responsibility in such amounts and covering such losses and risks as is materially adequate for the conduct of their respective businesses and the value of their respective properties. Neither the Company nor any such Subsidiary has been refused any insurance coverage sought or applied for and neither the Company nor any such Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers, in each case, as may be necessary to continue its business at a cost that, individually or in the aggregate, do not or would not reasonably be expected to have a Material Adverse Effect.

(ee) *Employee Benefits*. The Company and each Subsidiary is in compliance with all presently applicable provisions of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("*ERISA*"), except where failure to be in compliance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; no "reportable event" (as defined in ERISA) has occurred with respect to any "pension plan" (as defined in ERISA) that would reasonably be expected to have a Material Adverse Effect; the Company and each Subsidiary has not incurred and does not expect to incur liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "pension plan" or (ii) Sections 412 or 4971 of the Internal Revenue Code of 1986, as amended, including the regulations and published interpretations thereunder (the "*Code*") that, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect; and each "pension plan" for which the Company or any Subsidiary would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified except where failure to be so qualified would reasonably be expected to have a Material Adverse Effect, and, to the Company's knowledge, nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification.

(ff) *Employee Relations.*

(i) Neither the Company nor any of its Subsidiaries is a party to any collective bargaining agreement or employs any member of a union. No executive officer of the Company or any of its Subsidiaries (as defined in Rule 501(f) of the 1933 Act) or other key employee of the Company or any of its Subsidiaries has notified the Company or any such Subsidiary in writing that such officer intends to leave the Company or any such Subsidiary or otherwise terminate such officer's employment with the Company or any such Subsidiary. To the Company's knowledge, no current executive officer or other key employee of the Company or any of its Subsidiaries is in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement, non-competition agreement, or any other contract or agreement or any restrictive covenant with a third party, and, to the Company's knowledge, the continued employment of each such executive officer or other key employee (as the case may be) does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters, except where such violation would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(ii) The Company and its Subsidiaries are in compliance with all federal, state, local and foreign laws and regulations respecting labor, employment and employment practices and benefits, terms and conditions of employment and wages and hours, except where failure to be in compliance would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(gg) *Transactions with Affiliates.* To the Company's knowledge, there are no affiliations or associations between the Company, on the one hand, and any of the Company's officers, directors or 5% or greater securityholders, on the other hand, except as set forth in the Registration Statement, the Disclosure Package and the Prospectus. There are no relationships or related-party transactions involving the Company or any of the Subsidiaries or, to the knowledge of the Company, any other person required to be described in the Registration Statement, the Statutory Prospectus or the Prospectus pursuant to Item 404 of Regulation S-K which have not been described in the Registration Statement, the Statutory Prospectus or the Prospectus as required.

(hh) *Environmental Laws.* The Company and its Subsidiaries (A) are in compliance with all Environmental Laws (as defined below), (B) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (C) are in compliance with all terms and conditions of any such permit, license or approval where, in each of the foregoing clauses (A), (B) and (C), the failure to so comply could be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect. The term "*Environmental Laws*" means all federal, state, local or foreign laws relating to pollution or protection of the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata), including, without limitation, laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "*Hazardous Materials*") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations issued, entered, promulgated or approved thereunder.

(ii) *Listing; 1934 Act Registration.* The Common Stock is quoted for trading on the Principal Market. The Company has taken no action designed to, or which would reasonably be expected to have the effect of, terminating the registration of the Common Stock under the 1934 Act or the quotation of the Common Stock on the Principal Market, nor has the Company received any notification that the SEC or the Principal Market is contemplating terminating such registration or quotation.

(jj) *No Integrated Offering.* The Company has not sold or issued any securities that would be integrated with the offering of the Securities contemplated by this Agreement and the other Transaction Documents pursuant to the 1933 Act, the Rules and Regulations or the interpretations thereof by the SEC. None of the Company, its Subsidiaries, any of their affiliates, and any Person acting on their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to require approval of stockholders of the Company for purposes of any applicable stockholder approval provisions, including, without limitation, under the rules and regulations of any exchange or automated quotation system on which any of the securities of the Company are listed or designated. None of the Company, its Subsidiaries, their affiliates and any Person acting on their behalf will take any action or steps referred to in the preceding sentence that would cause the offering of the Securities to be integrated with other offerings for purposes of any such applicable stockholder approval provisions.

(kk) *Brokerage Fees; Commissions.* Except as set forth herein and described in the Registration Statement, the Disclosure Package and the Prospectus, neither the Company nor any of its Subsidiaries is a party to any contract, agreement or understanding with any person that would give rise to a valid claim against the Company or the Investors for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Securities. The Company shall be responsible for the payment of any placement agent's fees, financial advisory fees, or broker's commissions (other than for persons engaged by any Investor or its investment advisor) relating to or arising out of the transactions contemplated hereby. The Company shall pay, and hold each Investor harmless against, any liability, loss or expense (including, without limitation, attorney's fees and out-of-pocket expenses) arising in connection with such claim (other than for claims made by Persons engaged by the Investors). The Company acknowledges that it has engaged the Placement Agent as placement agent in connection with the sale of the Securities. Other than the Placement Agent, neither the Company nor any of its Subsidiaries has engaged any placement agent or other agent in connection with the sale of the Securities.

(ll) *Consents.* Other than as described in Section 2(t) hereof, or as have been previously obtained, filed or provided, neither the Company nor any of its Subsidiaries is required to obtain any consent or authorization of, or provide prior notice to any other Person in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents, in each case in accordance with the terms hereof or thereof. The Company and its Subsidiaries are unaware of any facts or circumstances that might prevent the Company from obtaining, effecting or providing any of the consents, authorizations or notices required in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents, in each case in accordance with the terms hereof or thereof. pursuant to the preceding sentence.

(mm) *Acknowledgment Regarding Investor's Purchase of Securities.* The Company acknowledges and agrees that each Investor is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby and that, except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, no Investor is (i) an officer or director of the Company or any of its Subsidiaries, (ii) an "affiliate" of the Company or any of its Subsidiaries (as defined in Rule 405 of the 1933 Act) or (iii) to the knowledge of the Company, a "beneficial owner" of more than 10% of the shares of Common Stock (as defined for purposes of Rule 13d-3 of the 1934 Act). The Company further acknowledges that no Investor is acting as a financial advisor or fiduciary of the Company or any of its Subsidiaries (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby, and any advice given by an Investor or any of its representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to such Investor's purchase of the Securities. The Company further represents to each Investor that the Company's decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives.

(nn) *Dilutive Effect.* The Company understands and acknowledges that the number of Conversion Shares issuable pursuant to the terms of the Certificate of Designations and the number of Warrant Shares issuable upon exercise of the Warrants will increase in certain circumstances. The Company further acknowledges that its obligations to issue (i) Conversion Shares in accordance with the SPA and the Certificate of Designations and (ii) Warrant Shares upon exercise of the Warrants in accordance with the SPA and the Warrants are, in each case, subject to the terms and conditions set forth therein, absolute and unconditional regardless of the dilutive effect that such issuance may have on the ownership interests of other stockholders of the Company.

(oo) *Application of Takeover Protections; Rights Agreement.* The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable the Company's issuance of the Securities and any Investor's ownership of the Securities from the provisions of any control share acquisition, interested stockholder, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Certificate of Incorporation of the Company or the laws of the state of its incorporation which is or could become applicable to any Investor as a result of the transactions contemplated by this Agreement and the other Transaction Documents, including, without limitation, the Company's issuance of Securities and each Investor's ownership of the Securities. Except as set forth in the Registration Statement, the Disclosure Package and the Prospectus, the Company does not have any stockholder rights plan or similar arrangement relating to accumulations of beneficial ownership of Common Stock or a change in control of the Company. For the avoidance of doubt, the provisions of this Section 2(oo) are for the benefit of the Placement Agent on the date hereof and are not transferable to any other Person.

(pp) *Subsidiary Rights.* The Company or one of its Subsidiaries has the unrestricted right to vote, and (subject to limitations imposed by applicable law) to receive dividends and distributions on, all capital securities of its Subsidiaries as owned by the Company or such Subsidiary.

(qq) *Off Balance Sheet Arrangements.* There is no transaction, arrangement, or other relationship between the Company and an unconsolidated or other off balance sheet entity that is required to be disclosed by the Company in its 1934 Act filings and is not so disclosed or that otherwise would be reasonably likely to have a Material Adverse Effect.

(rr) *Transfer Taxes*. On the Closing Date, all stock transfer or other similar taxes (other than income or similar taxes) which are required to be paid in connection with the sale and transfer of the Securities to be sold to each Investor pursuant to the SPA will be, or will have been, fully paid or provided for by the Company, and all laws imposing such taxes will be or will have been complied with.

(ss) *Acknowledgement Regarding Investors' Trading Activity*. The Company acknowledges and agrees (i) that none of the Investors has been asked to agree, nor has any Investor agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) that future open market or other transactions by any Investor, including, without limitation, short sales or "derivative" transactions, after the closing of the transactions contemplated by this Agreement, the SPA or future transactions, may negatively impact the market price of the Company's publicly-traded securities; (iii) that any Investor, and counter parties in "derivative" transactions to which any such Investor is a party, directly or indirectly, presently may have a "short" position in the Common Stock; and (iv) that such Investor shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction. The Company further understands and acknowledges that (a) one or more Investors may engage in hedging and/or trading activities at various times during the periods that the Securities are outstanding, including, without limitation, during the period that the value of the Conversion Shares and the Warrant Shares deliverable with respect to Securities are being determined and (b) such hedging and/or trading activities (if any) could reduce the value of the existing stockholders' equity interests in the Company at and after the time that the hedging and/or trading activities are being conducted. The Company acknowledges that such aforementioned hedging and/or trading activities do not constitute a breach of this Agreement, the SPA, the Certificate of Designations, the Warrants or any of the documents executed in connection herewith.

(tt) *U.S. Real Property Holding Corporation*. Neither the Company, nor any of its Subsidiaries, is or has ever been a U.S. real property holding corporation within the meaning of Section 897 of the Code and the Company and each Subsidiary shall so certify upon the Placement Agent's request.

(uu) *Shell Company Status*. The Company is not, and has not in the past five (5) years been, an issuer identified in Rule 144(i)(1). More than one (1) year has lapsed since the Company filed current "Form 10 information" (as defined in Rule 144(i)(3)) with the SEC reflecting its status as an entity that was no longer an issuer described in Rule 144(i)(1)(i).

(vv) *Bank Holding Company*. Neither the Company nor any of its Subsidiaries or affiliates is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA") and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its Subsidiaries or affiliates owns or controls, directly or indirectly, five percent or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(ww) *SEC Documents; Financial Statements*. During the two (2) years prior to the date hereof, the Company has timely filed all reports, schedules, forms, statements and other documents required to be filed by it with the SEC pursuant to the reporting requirements of the

1934 Act (all of the foregoing filed prior to the date hereof, and all exhibits included therein and financial statements, notes and schedules thereto and documents incorporated by reference therein being hereinafter referred to as the “SEC Documents”). The Company has delivered to the Investors or their respective representatives true, correct and complete copies of the SEC Documents not available on the EDGAR system. As of their respective filing dates, the SEC Documents complied in all material respects with the requirements of the 1934 Act and the rules and regulations of the SEC promulgated thereunder applicable to the SEC Documents, and none of the SEC Documents, at the time they were filed with the SEC, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. As of their respective filing dates, the financial statements of the Company included in the SEC Documents complied as to form in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto. Such financial statements have been prepared in accordance with generally accepted accounting principles, consistently applied, during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto, or (ii) in the case of unaudited interim statements, to the extent they may exclude footnotes or may be condensed or summary statements) and fairly present in all material respects the financial position of the Company as of the dates thereof and the results of its operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal year-end audit adjustments). No other information provided by or on behalf of the Company to the Investors which is not included in the SEC Documents contains any untrue statement of a material fact or omits to state any material fact necessary in order to make the statements therein, in the light of the circumstance under which they were made, not misleading.

(xx) *Securities Purchase Agreement.* The Company has entered into a Securities Purchase Agreement, dated as of August 16, 2017, with each of the Investors that contains certain representations, warranties, covenants and agreements of the Company.

(yy) *Lock-Up Agreements.* The Company and each of the parties set forth on Exhibit D hereto has executed and delivered to the Company a lock up agreement in the form attached hereto as Exhibit E (the “*Lock-Up Agreement*”).

(zz) *Indebtedness and Other Contracts.* Except as set forth in the SEC Documents or on Schedule 2(zz), neither the Company nor any of its Subsidiaries, (i) has any outstanding Indebtedness (as defined below), (ii) is a party to any contract, agreement or instrument relating to Indebtedness, the violation of which, or default under which, by the other party(ies) to such contract, agreement or instrument would reasonably be expected to result in a Material Adverse Effect, (iii) is in violation of any term of, or in default under, any contract, agreement or instrument relating to any Indebtedness, except where such violations and defaults would not result, individually or in the aggregate, in a Material Adverse Effect, or (iv) is a party to any contract, agreement or instrument relating to any Indebtedness, the performance of which, in the judgment of the Company’s officers, has or is expected to have a Material Adverse Effect. Schedule 2(zz) provides a detailed description of the material terms of any such outstanding Indebtedness, including, without limitation, descriptions of any defaults, forbearances, accounts receivable and accounts payable thereunder. For purposes of this Agreement: (x) “Indebtedness” of any Person means, without duplication (A) all indebtedness for borrowed money, (B) all obligations issued, undertaken or assumed as the deferred purchase price of property or services (including, without limitation, “capital leases” in accordance with GAAP consistently applied, during the periods involved) (other than trade payables entered into in the ordinary course of business consistent with past practice), (C) all reimbursement or payment obligations with respect

to letters of credit, surety bonds and other similar instruments, (D) all obligations evidenced by notes, bonds, debentures or similar instruments, including obligations so evidenced incurred in connection with the acquisition of property, assets or businesses, (E) all indebtedness created or arising under any conditional sale or other title retention agreement, or incurred as financing, in either case with respect to any property or assets acquired with the proceeds of such indebtedness (even though the rights and remedies of the seller or bank under such agreement in the event of default are limited to repossession or sale of such property), (F) all monetary obligations under any leasing or similar arrangement which, in connection with GAAP, consistently applied for the periods covered thereby, is classified as a capital lease, (G) all indebtedness referred to in clauses (A) through (F) above secured by (or for which the holder of such Indebtedness has an existing right, contingent or otherwise, to be secured by) any mortgage, claim, lien, tax, right of first refusal, pledge, charge, security interest or other encumbrance upon or in any property or assets (including accounts and contract rights) owned by any Person, even though the Person which owns such assets or property has not assumed or become liable for the payment of such indebtedness, and (H) all Contingent Obligations in respect of indebtedness or obligations of others of the kinds referred to in clauses (A) through (G) above; and (y) “*Contingent Obligation*” means, as to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to any indebtedness, capital lease or other obligation of another Person if the primary purpose or intent of the Person incurring such liability, or the primary effect thereof, is to provide assurance to the obligee of such liability that such liability will be paid or discharged, or that any agreements relating thereto will be complied with, or that the holders of such liability will be protected (in whole or in part) against loss with respect thereto.

(aaa) *Stock Option Plans*. Each stock option granted by the Company was granted (i) in accordance with the terms of the applicable Company stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP consistently applied, during the periods involved and applicable law. No stock option granted under the Company’s stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

(bbb) *No Disagreements with Accountants and Lawyers*. There are no material disagreements of any kind presently existing, or reasonably anticipated by the Company to arise, between the Company and the accountants and lawyers formerly or presently employed by the Company and the Company is current with respect to any fees owed to its accountants and lawyers which could affect the Company’s ability to perform any of its obligations under any of the Transaction Documents.

(ccc) *Forward-Looking Statements*. No forward-looking statements (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in either the Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(ddd) *Corporate Records*. The minute books of the Company, representing all existing records of all meetings and actions of the board of directors (including, Audit, Compensation and Stock Option, and Nominating Committees) and stockholders of the Company (collectively, the “*Corporate Records*”) through the date of the latest meeting and action have been made available to the Placement Agent and counsel for the Placement Agent. All such Corporate Records are complete and accurately reflect, in all material respects, all transactions referred to in such Corporate Records. There are no material transactions, agreements or other actions that have been consummated by the Company that are not properly approved and/or recorded in the Corporate Records of the Company.

(eee) *Margin Securities*. The Company does not own any “margin securities” as that term is defined in Regulation U of the Board of Governors of the Federal Reserve System (the “*Federal Reserve Board*”), and none of the proceeds of the sale of the Securities will be used, directly or indirectly, for the purpose of purchasing or carrying any margin security, for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry any margin security or for any other purpose which might cause any of the Securities to be considered a “purpose credit” within the meanings of Regulation T, U or X of the Federal Reserve Board.

(fff) *Rated Securities*. At the Applicable Time there were, and as of the Closing Date there will be, no securities of or guaranteed by the Company that are rated by a “nationally recognized statistical rating organization,” as that term is defined in Rule 436(g)(2) promulgated under the Act.

(ggg) *FINRA Affiliations*. There are no affiliations or associations between (i) any member of the FINRA and (ii) the Company or any of the Company’s officers, directors or 5% or greater securityholders or any beneficial owner of the Company’s unregistered equity securities that were acquired at any time on or after the one hundred eightieth (180th) day immediately preceding the date the Registration Statement was initially filed with the SEC, except as set forth in the Registration Statement, the Disclosure Package and the Prospectus.

(hhh) *Trading Market*. Assuming the accuracy of the representations of the Investors in the SPA, no approval of the shareholders of the Company under the rules and regulations of any trading market (including Rule 4350 of the NASDAQ Marketplace Rules) is required for the Company to issue and deliver to the Investors the Securities.

(iii) *Clinical Studies*. The clinical, pre-clinical and other studies and tests conducted by or on behalf of or sponsored by the Company or in which the Company or products or product candidates have participated that are described in the Registration Statement, the Disclosure Package and the Prospectus were and, if still pending, are being conducted in accordance in all material respects with all applicable federal, state or foreign statutes, laws, rules and regulations, as applicable (including, without limitation, those administered by the Food and Drug Administration of the U.S. Department of Health and Human Services (the “*FDA*”) or by any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA and current Good Laboratory and Good Clinical Practices) and in accordance with experimental protocols, procedures and controls pursuant to, where applicable, accepted professional scientific methods. The descriptions in the Registration Statement, the Prospectus and the Disclosure Package of the results of such studies, tests and trials are accurate and complete in all material respects and fairly present the published data derived from such studies, tests and trials. The Company has not received any notices or other correspondence from the FDA or any other foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA with respect to any ongoing clinical or pre-clinical studies or tests requiring the termination, suspension or material modification of such studies, tests or preclinical or clinical trials, which termination, suspension or material modification would reasonably be expected to result in a Material Adverse Effect. No filing or submission to the FDA or any other federal, state or foreign regulatory body, that is intended to be the basis for any approval, contains any material statement or material false information. The

Company is in compliance with all applicable federal, state, local and foreign laws, regulations, orders and decrees governing their business as prescribed by the FDA, or any other federal, state or foreign agencies or bodies, including those bodies and agencies engaged in the regulation of pharmaceuticals or biohazardous substances or materials, except where noncompliance would not, singly or in the aggregate, result in a Material Adverse Effect.

3. **Covenants.** The Company covenants and agrees with the Placement Agent as follows:

(a) *Reporting Obligations; Exchange Act Compliance.* The Company will file: (i) each Preliminary Prospectus and the Prospectus with the Commission within the time periods specified by Rule 424(b) and Rules 430A, 430B or 430C under the 1933 Act, as applicable, (ii) any Issuer Free Writing Prospectus to the extent required by Rule 433 under the 1933 Act, if applicable, (iii) all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the 1934 Act subsequent to the date of the Prospectus during the Prospectus Delivery Period, and (iv) furnish copies of each Issuer Free Writing Prospectus, if any, (to the extent not previously delivered) to the Placement Agent prior to 11:00 a.m. Eastern time, on the second business day next succeeding the date of this Agreement in such quantities as the Placement Agent shall reasonably request.

(b) *Filing of Amendments.* The Company will promptly advise the Placement Agent of any proposal to amend or supplement the Registration Statement, the Prospectus or the Disclosure Package until the completion of the purchase and sale of the Securities contemplated herein and will afford the Placement Agent a reasonable opportunity to comment on any such proposed amendment or supplement and to file no such amendment or supplement to which the Placement Agent shall object in writing, which objection shall not be unreasonable; and the Company will also advise the Placement Agent promptly of (i) the filing of any such amendment or supplement, (ii) any request by the Commission or its staff for any amendment to the Registration Statement, for any supplement to any Preliminary Prospectus or for any additional information, (iii) the time and date when any post-effective amendment to the Registration Statement becomes effective, but only during the Prospectus Delivery Period; (iv) receipt by the Company of any notification with respect to any suspension or the approval of the Shares and Warrant Shares from any securities exchange upon which it is listed for trading or included or designated for quotation, or the initiation or threatening of any proceeding for such purpose, (v) the institution by the Commission of any stop order proceedings in respect of the Registration Statement or the threatening of any proceeding for that purpose, and (vi) the receipt by the Company of any notification with respect to the suspension of the qualification of the Securities in any jurisdiction or the institution or threatening of any proceedings for such purpose. The Company will use its best efforts to prevent the issuance of any such stop order or the suspension of any such qualification and, if issued, to obtain as soon as possible the withdrawal thereof.

(c) *Continued Compliance with Securities Law.* If, at any time prior to the filing of the Prospectus pursuant to Rule 424(b), any event occurs as a result of which the Disclosure Package as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, the Company will (i) promptly notify the Placement Agent so that any use of the Disclosure Package may cease until it is amended or supplemented and (ii) amend or supplement the Disclosure Package to correct such statements or omission. If, during the Prospectus Delivery Period, any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, or if it is necessary at any

time to amend the Registration Statement or supplement the Prospectus to comply with the 1933 Act, the Company will (A) promptly notify the Placement Agent of such event and (B) promptly prepare and file with the Commission and furnish, at its own expense, to the Placement Agent and, to the extent applicable, the dealers and any other dealers upon request of the Placement Agent, an amendment or supplement which will correct such statement or omission or an amendment which will effect such compliance.

(d) *Issuer Free Writing Prospectuses.* The Company will (i) not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a “free writing prospectus” (as defined in Rule 405 under the 1933 Act) required to be filed by the Company with the Commission under Rule 433 under the 1933 Act unless the Placement Agent approves its use in writing prior to first use (each, a “Permitted Free Writing Prospectus”); provided that the prior written consent of the Placement Agent shall be deemed to have been given in respect of the Issuer Free Writing Prospectus(es) included in Schedule I hereto and any electronic road show, (ii) treat each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus, (iii) comply with the requirements of Rules 164 and 433 under the 1933 Act applicable to any Issuer Free Writing Prospectus, including the requirements relating to timely filing with the Commission, legending and record keeping and (iv) not take any action that would result in the Placement Agent or the Company being required to file with the Commission pursuant to Rule 433(d) under the 1933 Act a free writing prospectus prepared by or on behalf of the Placement Agent that such Placement Agent otherwise would not have been required to file thereunder. The Company will satisfy the conditions in Rule 433 under the 1933 Act to avoid a requirement to file with the Commission any electronic road show.

(e) [Reserved.]

(f) *Conflicting Issuer Free Writing Prospectus.* 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 relating to the Securities 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 promptly will notify the Placement Agent and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus in reliance upon, and in conformity with, written information furnished to the Company by the Placement Agent specifically for inclusion therein, which information the parties hereto agree is limited to the Placement Agent’s Information.

(g) *Delivery of Copies.* The Company will deliver promptly to the Placement Agent and its counsel such number of the following documents as the Placement Agent shall reasonably request: (i) conformed copies of the Registration Statement as originally filed with the Commission and each amendment thereto (in each case excluding exhibits), (ii) copies of any Preliminary Prospectus related to the Securities; (iii) any Issuer Free Writing Prospectus, (iv) during the Prospectus Delivery Period, copies of the Prospectus (or any amendments or supplements thereto); (v) any document incorporated by reference in the Prospectus (other than any such document that is filed with the Commission electronically via EDGAR or any successor system) and (vi) all correspondence to and from, and all documents issued to and by, the Commission in connection with the registration of the Securities under the 1933 Act.

(h) *Blue Sky Laws*. The Company will promptly take or cause to be taken, from time to time, such actions as the Placement Agent may reasonably request to qualify the Securities for offering and sale under the state securities, or blue sky, laws of such states or other jurisdictions as such Placement Agent may reasonably request and to maintain such qualifications in effect so long as such Placement Agent may request for the distribution of the Securities, *provided*, that in no event shall the Company be obligated to qualify as a foreign corporation in any jurisdiction in which it is not so qualified or to file a general consent to service of process in any jurisdiction or subject itself to taxation as doing business in any jurisdiction. The Company will advise the Placement Agent promptly of the suspension of the qualification or registration of (or any exemption relating to) the Securities for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use its best efforts to obtain the withdrawal thereof at the earliest possible moment.

(i) *Earnings Statement*. As soon as practicable, the Company will make generally available (provided that any information or documents available on the SEC's Electronic Gathering Analysis and Retrieval System shall be considered furnished for purposes hereof) to holders of its securities and deliver to the Placement Agent, an earnings statement of the Company (which need not be audited) covering a period of at least 12 months beginning after the date of this Agreement that will satisfy the provisions of Section 11(a) of the 1933 Act and the Rules and Regulations (including, at the option of the Company, Rule 158).

(j) *Use of Proceeds*. The Company will apply the net proceeds from the sale of the Securities in the manner set forth in the Registration Statement, the Disclosure Package and the Prospectus under the heading "Use of Proceeds."

(k) *Lock-Up Agreements*. The Company will cause each of its executive officers and directors whose names are set forth on Exhibit D hereto to furnish to the Placement Agent, on the date hereof, a Lock-Up Agreement, substantially in the form of Exhibit E hereto. The Company will enforce the terms of each Lock-Up Agreement and issue stop transfer instructions to the transfer agent for the Common Stock with respect to any transaction or contemplated transaction that would constitute a breach or default under the applicable Lock-Up Agreement.

(l) *Lock-Up Period*. Beginning on the date hereof and continuing for a period of 90 days after the date of the Prospectus (the "*Lock-Up Period*"), the Company will not (i) offer to sell, hypothecate, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of, directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the 1934 Act, with respect to, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock; (ii) file or cause to become effective a registration statement under the 1933 Act relating to the offer and sale of any shares of Common Stock or securities convertible into or exercisable or exchangeable for Common Stock except for a registration statement on Form S-8 relating to employee benefit plans or a shelf registration statement on Form S-3 filed pursuant to Rule 415 or (iii) enter into any swap, hedge or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (i), (ii) or (iii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, without the prior written consent of the Placement Agent (which consent may be withheld in its sole discretion), other than (i) the Securities to be sold hereunder, (ii) the issuance of Common Stock or options to acquire Common Stock pursuant to the Company's employee benefit plans, qualified stock option plans or other employee compensation plans as such plans (A) are in existence on the date hereof and described in the Registration Statement (excluding the exhibits thereto), the Disclosure Package and the Prospectus or (B) are set forth in the Company's

Schedule 14A filed with the Commission on April 29, 2016, its Form S-4 filed with the Commission on February 3, 2017 or its Form S-8 filed with the Commission on May 10, 2017, (iii) issuances of Common Stock upon the exercise of options or warrants disclosed as outstanding in the Registration Statement (excluding the exhibits thereto), the Disclosure Package and the Prospectus or upon the conversion or exchange of convertible or exchangeable securities outstanding as of the date of this Agreement; (iv) the issuance by the Company of any shares of Common Stock as consideration for mergers, acquisitions, other business combinations, or strategic alliances, occurring after the date of this Agreement; *provided* that each recipient of shares pursuant to this clause (iv) agrees that all such shares remain subject to restrictions substantially similar to those contained in this subsection 3(l); (v) the purchase or sale of the Company's securities pursuant to a plan, contract or instruction that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B) that was in effect prior to the date hereof or (vi) the issuance of any Securities in connection with or pursuant to any shareholder rights plan or "poison pill."

(m) *Public Communications*. Prior to 9:30 a.m. New York City time on the business day immediately subsequent to the date hereof, the Company shall issue a press release (the "*Press Release*") reasonably acceptable to the Placement Agent disclosing the execution of this Agreement, the SPA and the transaction contemplated hereby and thereby. Prior to the Closing Date, the Company will not issue any press release or other communication directly or indirectly or hold any press conference with respect to the Company, its condition, financial or otherwise, or the earnings, business, operations or prospects of any of them, or the offering of the Securities (except for routine oral marketing communications in the ordinary course of business and consistent with the past practices of the Company and of which the Placement Agent is notified), without the prior written consent of the Placement Agent, unless in the reasonable judgment of the Company and its counsel, and after notification to the Placement Agent, such press release or communication is required by law or applicable stock exchange, in which case the Company shall use its reasonable best efforts to allow the Placement Agent reasonable time to comment on such release or other communication in advance of such issuance.

(n) *Stabilization*. The Company will not take directly or indirectly any action designed, or that might reasonably be expected to cause or result in, or that will constitute, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities.

(o) *Transfer Agent*. The Company shall engage and maintain, at its expense, a transfer agent and, if necessary under the jurisdiction of incorporation of the Company, a registrar for the Shares and Warrant Shares.

(p) *Listing*. The Company shall use its best efforts to cause the Shares and Warrant Shares to be listed for quotation on the NASDAQ Global Market at the Closing Date and to maintain such listing.

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

(r) *Sarbanes-Oxley Act*. The Company will comply in all material respects with all effective applicable provisions of the Sarbanes Oxley Act.

(s) *Periodic Reports*. The Company will use its best efforts to file with the Commission such periodic and special reports as required by the 1933 Act.

(t) *Reservation of Shares.* The Company shall reserve and keep available at all times a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue the Conversion Shares and the Warrant Shares.

4. **Costs and Expenses.** The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or reimburse if paid by the Placement Agent all actual and accountable out-of-pocket expenses of the Company incident to the performance of the obligations of the Company under this Agreement in connection with the transactions contemplated hereby, including but not limited to costs and expenses of or relating to (i) the preparation, printing, filing, delivery and shipping of the Registration Statement, any Issuer Free Writing Prospectus, each Preliminary Prospectus, the Disclosure Package and the Prospectus, and any amendment or supplement to any of the foregoing and the printing and furnishing of copies of each thereof to the Placement Agent and dealers (including costs of mailing and shipment), (ii) the registration, issue, sale and delivery of the Securities including any stock or transfer taxes and stamp or similar duties payable upon the sale, issuance or delivery of the Shares, the Conversion Shares or Warrant Shares and the printing, delivery, and shipping of the certificates representing the Shares, Conversion Shares or Warrant Shares, (iii) the registration or qualification of the Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions designated pursuant to Section 3(h), (including the reasonable legal fees and filing fees, and other disbursements of counsel to the Placement Agent in connection therewith), and, if reasonably requested by the Placement Agent, the preparation and printing and furnishing of copies of any blue sky surveys to the Placement Agent and to dealers, (iv) the fees and expenses of any transfer agent or registrar for the Shares, Conversion Shares or Warrant Shares, (v) any filings required to be made by the Placement Agent or the Company with FINRA (other than the fees of counsel to the Placement Agent), (vi) fees, disbursements and other charges of counsel to the Company, (vii) listing fees, if any, for the listing or quotation of the Shares, Conversion Shares or Warrant Shares on the NASDAQ Global Market, (viii) fees and disbursements of the Company's auditor incurred in delivering the letter(s) described in Section 5(j) of this Agreement, and (ix) the costs and expenses of the Company and the Placement Agent in connection with the marketing of the offering and the sale of the Securities to prospective investors including, but not limited to, those related to any presentations or meetings undertaken in connection therewith including, without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged with the prior written consent of the Company in connection with the road show presentations, travel, lodging and other expenses incurred by the officers of the Company and any such consultants, and the cost of any aircraft or other transportation chartered in connection with the road show. In addition to the above, the Company shall reimburse the Placement Agent for all actual and accountable fees, disbursements and other charges of counsel to the Placement Agent in an amount not to exceed \$150,000.

5. **Conditions of Placement Agent's Obligations.** The obligations of the Placement Agent hereunder and the Investors under the SPA are subject to the following conditions:

(a) *Filings with the Commission.* Each Issuer Free Writing Prospectus, if any, and the Prospectus shall have been filed with the Commission within the applicable time period prescribed for such filing by, and in compliance with, the Rules and Regulations and in accordance with Section 3(a) hereof.

(b) *Abbreviated Registration Statement.* If the Company has elected to rely upon Rule 462(b), the registration statement filed under Rule 462(b) shall have become effective under the 1933 Act by 8:00 a.m., Washington, D.C. time, on the business day next succeeding the date of this Agreement.

(c) *No Stop Orders.* Prior to the Closing: (i) no stop order suspending the effectiveness of the Registration Statement or any part thereof, preventing or suspending the use of the Prospectus or any Issuer Free Writing Prospectus or any part thereof shall have been issued

under the 1933 Act and no proceedings for that purpose or pursuant to Section 8A under the 1933 Act shall have been initiated or threatened by the Commission, (ii) no order suspending the qualification or registration of the Securities, the Conversion Shares or the Warrant Shares under the securities or blue sky laws of any jurisdiction shall be in effect and (iii) all requests for additional information on the part of the Commission (to be included or incorporated by reference in the Registration Statement, the Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus or otherwise) shall have been complied with to the reasonable satisfaction of the Placement Agent. On or prior to the Closing Date, the Registration Statement or any amendment thereof or supplement thereto shall not contain an untrue statement of material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and neither the Disclosure Package, any Issuer Free Writing Prospectus or the Prospectus or any amendment thereof or supplement thereto shall contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances in which they were made, not misleading.

(d) *Action Preventing Issuance.* No action shall have been taken and no law, statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental agency or body which would prevent the issuance or sale of the Securities or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company; and no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued which would prevent the issuance or sale of the Securities or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company.

(e) *Objection of the Placement Agent.* No Prospectus or amendment or supplement to the Registration Statement shall have been filed to which the Placement Agent shall have objected in writing, which objection shall not be unreasonable.

(f) *Material Adverse Change.* Subsequent to the date of the latest audited financial statements included or incorporated by reference in the Disclosure Package, (i) the Company has not sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth in the Disclosure Package, (ii) 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 shares upon the exercise of outstanding options or warrants or the conversion of convertible indebtedness), or material change in the short-term debt or long-term debt of the Company (other than upon conversion of convertible indebtedness) or any material adverse change, in or affecting the business, assets, general affairs, management, financial position, prospects, stockholders' equity or results of operations of the Company, otherwise than as set forth in the Disclosure Package, the effect of which, in any such case described in clause (i) or (ii) of this paragraph (f), is, in the judgment of the Placement Agent, so material and adverse as to make it impracticable or inadvisable to proceed with the sale or delivery of the Securities on the terms and in the manner contemplated in the Disclosure Package.

(g) *Representations and Warranties.* Each of the representations and warranties of the Company contained herein shall be true and correct when made and on and as of the Closing Date, as if made on such date (except that those representations and warranties that address matters only as of a particular date shall remain true and correct as of such date), and all covenants and agreements herein contained to be performed on the part of the Company and all conditions herein contained to be fulfilled or complied with by the Company at or prior to the Closing Date shall have been duly performed, fulfilled or complied with.

(h) *Opinions of Counsel to the Company.* The Placement Agent shall have received from Proskauer Rose, LLP, counsel to the Company, such counsel's written opinion, addressed to the Placement Agent and dated the Closing Date, in a form reasonably acceptable to the Placement Agent. Such counsel shall also have furnished to the Placement Agent a written negative assurance statement, addressed to the Placement Agent and dated the Closing Date, in a form reasonably acceptable to the Placement Agent.

(i) *Opinion of Counsel to the Placement Agent.* The Placement Agent shall have received from Goodwin Procter LLP, counsel for the Placement Agent, such opinion or opinions, dated the Closing Date and addressed to the Placement Agent, covering such matters as are customarily covered in transactions of this type.

(j) *Accountant's Comfort Letter.* On the date hereof, the Placement Agent shall have received a letter dated the date hereof, (the "*Comfort Letter*"), addressed to the Placement Agent and in form and substance reasonably satisfactory to the Placement Agent and its counsel, from each of E&Y and BDO, (i) confirming that they are independent public accountants with respect to the Company within the meaning of the 1933 Act and the Rules and Regulations and (ii) stating, as of the date hereof (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Disclosure Package, as of a date not more than three days prior to the date hereof), the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to underwriters, delivered according to Statement of Auditing Standards No. 72 and Statement of Auditing Standard No. 100 (or successor bulletins), in connection with registered public offerings.

(k) *Bring-Down Letter.* On the Closing Date, the Placement Agent shall have received from each of E&Y and BDO a letter (the "*Bring-Down Letter*"), dated the Closing Date, addressed to the Placement Agent and in form and substance reasonably satisfactory to the Placement Agent and its counsel, (i) confirming that they are independent public accountants with respect to the Company within the meaning of the 1933 Act and the Rules and Regulations, (ii) stating, as of the date of the Bring-Down Letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Disclosure Package and the Prospectus, as of a date not more than three days prior to the date of the Bring-Down Letter), the conclusions and findings of such firm with respect to the financial information and other matters covered by the Comfort Letter and (iii) confirming in all material respects the conclusions and findings set forth in the Comfort Letter.

(l) *Officer's Certificate.* The Placement Agent shall have received on the Closing Date a certificate, addressed to the Placement Agent and dated the Closing Date, of the chief executive or chief operating officer and the chief financial officer or chief accounting officer of the Company in each case, solely in his or her capacity as an officer of the Company, to the effect that:

(i) each of the representations, warranties and agreements of the Company in this Agreement were true and correct when originally made and are true and correct as of the Time of Sale and the Closing Date as if made on each such date (except that those representations and warranties that address matters only as of a particular date remain true and correct as of each such date); and the Company has complied with all agreements and satisfied all the conditions on its part required under this Agreement to be performed or satisfied at or prior to the Closing Date;

(ii) there has not been, subsequent to the date of the most recent audited financial statements included or incorporated by reference in the Disclosure Package, any material adverse change in the financial position or results of operations of the Company, or any change or development that, singularly or in the aggregate, would involve a material adverse change or a prospective material adverse change, in or affecting the condition (financial or otherwise), results of operations, business, assets or prospects of the Company except as set forth in the Prospectus;

(iii) no stop 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 Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus shall have been issued, and no proceedings for that purpose or pursuant to Section 8A under the 1933 Act shall be pending or to their knowledge, threatened by the Commission or any state or regulatory body;

(iv) the Registration Statement and each amendment thereto, at the Time of Sale and as of the date of this Agreement and as of the Closing Date did not include any untrue statement of a material fact and did not omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and the Disclosure Package, as of the Time of Sale and as of the Closing Date, any Issuer Free Writing Prospectus as of its date and as of the Closing Date, the Prospectus and each amendment or supplement thereto, as of the respective date thereof and as of the Closing Date, did not include any untrue statement of a material fact and did not omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances in which they were made, not misleading; and

(v) no event has occurred as a result of which it is necessary to amend or supplement the Registration Statement, the Prospectus or the Disclosure Package in order to make the statements therein not untrue or misleading in any material respect.

(m) *Secretary's Certificate.* On the Closing Date, the Company shall have furnished to the Placement Agent a Secretary's Certificate of the Company.

(n) *Lock-Up Agreements.* Each executive officer and director of the Company identified on Exhibit D hereto shall have entered into Lock-Up Agreements substantially in the form attached as Exhibit E hereto on or prior to the date hereof, and each such Lock-Up Agreement, or a copy thereof, shall have been delivered to you and shall be in full force and effect at the Time of Sale.

(o) *The NASDAQ Global Market.* The Shares, the Conversion Shares and Warrant Shares shall have been listed and authorized for trading on the NASDAQ Capital Market, and satisfactory evidence of such actions shall have been provided to the Placement Agent, which shall include verbal confirmations from a member of the NASDAQ staff.

(p) *Other Filings with the Commission.* The Company shall have prepared and filed with the Commission a Current Report on Form 8-K with respect to the transactions contemplated hereby, including as an exhibit thereto this Agreement and any other documents relating thereto.

(q) *No FINRA Objection.* The Placement Agent shall have not have received any unresolved objection from the FINRA as to the fairness and reasonableness of the amount of compensation allowable or payable to the Placement Agent in connection with the issuance and sale of the Securities.

(r) *Securities Purchase Agreement.* The Company shall have entered into the SPA with each of the Investors, and such agreements shall be in full force and effect on the Closing Date.

(s) *Additional Documents.* Prior to the Closing Date, the Company shall have furnished to the Placement Agent such further information, certificates or documents as the Placement Agent shall have reasonably requested.

All opinions, letters, evidence and certificates mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Placement Agent.

If any condition specified in this [Section 5](#) is not satisfied when and as required to be satisfied, this Agreement may be terminated by the Placement Agent by notice to the Company at any time prior to the Closing Date, which termination shall be without liability on the part of any party to any other party, except that [Section 4](#), [Section 6](#) and [Section 8](#) hereof shall at all times be effective and shall survive such termination.

6. Indemnification and Contribution.

(a) *Indemnification of the Placement Agent.* The Company agrees to indemnify, defend and hold harmless the Placement Agent, its directors and officers, any person who controls the Placement Agent within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act, and the successors and assigns of all of the foregoing persons, from and against any losses, claims, damages, expenses or liabilities, joint or several, to which the Placement Agent may become subject, under the 1933 Act, the 1934 Act, or other federal or state statutory law or regulation, the common law or otherwise (including in settlement of any litigation if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Disclosure Package, the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus or in any materials or information provided to Investors by, or with the approval of, the Company in connection with the marketing of the offering of the Common Stock ("*Marketing Materials*"), including any roadshow or investor presentations made to Investors by the Company (whether in person or electronically) or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse the Placement Agent for any legal or other expenses reasonably incurred by it in connection with investigating or defending against such loss, claim, damage, liability, expense or action; *provided, however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, expense, liability or action 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 Disclosure Package, the Prospectus, or any such amendment or supplement, any Issuer Free Writing Prospectus or in any Marketing Materials, in reliance upon and in conformity with written information furnished to the Company by the Placement Agent, specifically for use in the preparation thereof, which information the parties hereto agree is limited to the Placement Agent's Information.

(b) *Indemnification of the Company.* The Placement Agent agrees to indemnify, defend and hold harmless the Company, its directors and officers, against any losses, claims, damages, expenses or liabilities to which the Company may become subject, under the 1933 Act, the 1934 Act, or other federal or state statutory law or regulation, the common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Placement Agent), insofar as such losses, claims, damages, expenses or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Disclosure Package, the Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein 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 Disclosure Package, the Prospectus, or any such amendment or supplement thereto, or any Issuer Free Writing Prospectus in reliance upon and in conformity with written information furnished to the Company by the Placement Agent, specifically for use in the preparation thereof, which information the parties hereto agree is limited to the Placement Agent's Information relating to such Placement Agent, 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. Notwithstanding the provisions of this Section 6(b), in no event shall any indemnity by the Placement Agent under this Section 6(b) exceed the total compensation received by such Placement Agent in accordance with Section 1(b) hereof.

(c) *Notice and Procedures.* If any action, suit or proceeding (each, a "*Proceeding*") is brought against a person (an "*Indemnified Party*") in respect of which indemnity may be sought against the Company or the Placement Agent (as applicable, the "*Indemnifying Party*") pursuant to subsection (a) or (b) above, respectively, of this Section 6, such Indemnified Party shall promptly notify such Indemnifying Party in writing of the institution of such Proceeding and such Indemnifying Party shall assume the defense of such Proceeding, including the employment of counsel reasonably satisfactory to such Indemnified Party (who shall not, except with the consent of the Indemnified Party, be counsel to the Indemnifying Party) and payment of all fees and expenses; *provided, however*, that the omission to so notify such Indemnifying Party shall not relieve such Indemnifying Party from any liability which such Indemnifying Party may have to any Indemnified Party or otherwise, except to the extent the Indemnifying Party has been materially prejudiced by such failure; and *provided, further*, that the failure to notify the Indemnifying Party shall not relieve it from any liability that it may have to an Indemnified Party otherwise than under subsection (a) or (b) above. The Indemnified Party or parties shall have the right to employ its or their own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or parties unless (i) the employment of such counsel shall have been authorized in writing by the Indemnifying Party in connection with the defense of such Proceeding, (ii) the Indemnifying Party shall not have, within a reasonable period of time in light of the circumstances, employed counsel to defend such Proceeding or (iii) such Indemnified Party or parties shall have reasonably concluded upon written advice of counsel that there may be one or more legal defenses available to it or them which are different from, additional to or in conflict with those available to such Indemnifying Party (in which case such Indemnifying Party shall not have the right to direct that portion of the defense of such Proceeding on behalf of the Indemnified Party or parties, but such Indemnifying Party or parties may employ counsel and participate in the defense thereof but the fees and expenses of such counsel shall be at the expense of the Indemnifying Party), in any of which events such reasonable fees and expenses shall be borne by such Indemnifying Party and paid as incurred (it being understood, however, that such Indemnifying Party shall not be liable for the expenses of more than one separate counsel (in addition to any local counsel) in any one Proceeding or series

of related Proceedings in the same jurisdiction representing the Indemnified Parties who are parties to such Proceeding). An Indemnifying Party shall not be liable for any settlement of any Proceeding effected without its written consent but, if settled with its written consent, such Indemnifying Party agrees to indemnify and hold harmless the Indemnified Party or parties from and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time an Indemnified Party shall have requested an Indemnifying Party to reimburse the Indemnified Party for fees and expenses of counsel as contemplated by the second sentence of this Section 6(c), then the Indemnifying Party agrees that it shall be liable for any settlement of any Proceeding effected without its written consent if (i) such settlement is entered into more than 60 days after receipt by such Indemnifying Party of the aforesaid request, (ii) such Indemnifying Party shall not have fully reimbursed the Indemnified Party in accordance with such request prior to the date of such settlement and (iii) such Indemnified Party shall have given the Indemnifying Party at least 30 days' prior notice of its intention to settle. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened Proceeding in respect of which any Indemnified Party is or could have been a party and indemnity could have been sought hereunder by such Indemnified Party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding and does not include an admission of fault or culpability or a failure to act by or on behalf of such Indemnified Party.

(d) *Contribution.* If the indemnification provided for in this Section 6 is unavailable to an Indemnified Party under subsections (a) or (b) of this Section 6 or insufficient to hold an Indemnified Party harmless in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each applicable Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of the losses, claims, damages, liabilities or expenses referred to in subsection (a) or (b) above, (i) in such proportion as is appropriate to reflect the relative benefits received by the Indemnifying Party or parties on the one hand and the Indemnified Party or parties on the other from the offering of the Securities or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Indemnifying Party or parties on the one hand and the Indemnified Party or parties on the other hand in connection with the statements or omissions that resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Placement Agent on the other hand shall be deemed to be in the same respective proportions as the total net proceeds from the offering of the Securities (before deducting expenses) received by the Company bear to the discounts and commissions received by such Placement Agent. The relative fault of the Company on the one hand and such Placement Agent on the other hand 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, on the one hand, or by such Placement Agent, on the other hand, and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement, omission act or failure to act; *provided* that the parties hereto agree that the written information furnished to the Company by the Placement Agent for use in the Registration Statement or the Prospectus, or in any amendment or supplement thereto, consists solely of the Placement Agent's Information relating to the Placement Agent.

(e) *Allocation.* The Company and the Placement Agent agree that it would not be just and equitable if contribution pursuant to subsection (d) above were to be determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in the first sentence of Section 6(d) above. Notwithstanding the provisions of this Section 6(e), the Placement Agent shall not be required to contribute any amount in excess of the total commissions received by such Placement Agent in accordance with Section 1(b) less the amount of any damages which such Placement Agent has otherwise paid or become liable to pay by reason of any untrue or alleged untrue statement, omission or alleged omission, act or alleged act or failure to act or alleged failure to act. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The remedies provided for in this Section 6 are not exclusive and shall not limit any rights or remedies which may otherwise be available to any Indemnified Party at law or in equity.

(f) *Representations and Agreements to Survive Delivery.* The obligations of the Company under this Section 6 shall be in addition to any liability which the Company may otherwise have. The indemnity and contribution agreements contained in this Section 6 and the covenants, agreements, warranties and representations of the Company contained in this Agreement shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of the Placement Agent, any person who controls the Placement Agent within the meaning of either Section 15 of the 1933 Act or Section 20 of the 1934 Act or any affiliate of the Placement Agent, or by or on behalf of the Company, its directors or officers or any person who controls the Company within the meaning of either Section 15 of the 1933 Act or Section 20 of the 1934 Act, and (iii) the issuance and delivery of the Securities. The Company and the Placement Agent agree promptly to notify each other of the commencement of any Proceeding against it and, in the case of the Company, against any of the Company's officers or directors in connection with the issuance and sale of the Securities, or in connection with the Registration Statement, the Disclosure Package or the Prospectus.

7. Information Furnished by Placement Agent. The Company acknowledges that the statements set forth in the first sentence of the sixth paragraph and the ninth and thirteenth paragraphs under the heading "Plan of Distribution" in the Prospectus (the "*Placement Agent's Information*") constitute the only information relating to the Placement Agent furnished in writing to the Company by the Placement Agent as such information is referred to in Sections 2 and 6 hereof.

8. Termination. The Placement Agent shall have the right to terminate this Agreement by giving notice as hereinafter specified at any time at or prior to the Closing Date, without liability on the part of the Placement Agent to the Company, if (i) prior to delivery and payment for the Securities (A) trading in securities generally shall have been suspended on or by the New York Stock Exchange, the NYSE Amex, the NASDAQ Global Market or in the over the counter market (each, a "*Trading Market*"), (B) trading in the Common Stock of the Company shall have been suspended on any exchange, in the over-the-counter market or by the Commission, (C) a general moratorium on commercial banking activities shall have been declared by federal or New York state authorities or a material disruption shall have occurred in commercial banking or securities settlement or clearance services in the United States, (D) there shall have occurred any outbreak or material escalation of hostilities or acts of terrorism involving the United States or there shall have been a declaration by the United States of a national emergency or war, (E) there shall have occurred any other calamity or crisis or any material change in general economic, political or financial conditions in the United States or elsewhere, if the effect of any such event specified in clause (D) or (E), in the judgment of the Placement Agent, is material and adverse and makes it impractical or inadvisable to proceed with the completion of the sale of and payment for the Securities on the Closing Date on the terms and in the manner contemplated by this Agreement, the

Disclosure Package and the Prospectus, (ii) since the time of execution of this Agreement or the earlier respective dates as of which information is given in the Disclosure Package or incorporated by reference therein, there has been any Material Adverse Effect, (iii) the Company shall have failed, refused or been unable to comply with the terms or perform any agreement or obligation of this Agreement or the SPA, other than by reason of a default by the Placement Agent, or (iv) any condition of the Placement Agent's obligations hereunder is not fulfilled. Any such termination shall be without liability of any party to any other party except that the provisions of Section 4, Section 6, and Section 12 hereof shall at all times be effective notwithstanding such termination.

9. **Notices.** All statements, requests, notices and agreements hereunder shall be in writing or by facsimile, and:

(a) if to the Placement Agent, shall be delivered or sent by mail, telex or facsimile transmission as follows:

Piper Jaffray & Co.
U.S. Bancorp Center
800 Nicollet Mall
Minneapolis, Minnesota 55402
Attention: General Counsel
Email: james.m.martin@pjc.com

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

Goodwin Procter LLP
The New York Times Building
620 Eighth Avenue
New York, New York 10018
Attention: Michael D. Maline, Esq.
Email: mmaline@goodwinlaw.com

(b) if to the Company, shall be delivered or sent by mail, telex or facsimile transmission to:

Altimune, Inc.
19 Firstfield Road, Suite 200
Gaithersburg, Maryland 20878
Attention: William Enright
Email: benright@altimmune.com

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

Proskauer Rose, LLP
One International Place
Boston, MA 02110
Attention: Ori Solomon
Email: OSolomon@proskauer.com

Any such statements, requests, notices or agreements shall be effective only upon receipt. 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.

10. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and shall be binding upon the Placement Agent, the Company, and their respective successors and assigns. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person other than the persons mentioned in the preceding sentence any legal or equitable right, remedy or claim under or in respect of this Agreement, or any provisions herein contained, this Agreement and all conditions and provisions hereof being intended to be and being for the sole and exclusive benefit of such persons and for the benefit of no other person, except that (i) the representations, warranties, covenants, agreements and indemnities of the Company contained in this Agreement shall also be for the benefit of the controlling persons, officers and directors referred to in Section 6(a) hereof and the indemnities of the Placement Agent shall also be for the benefit of the controlling persons, officers and directors referred to in Section 6(b) hereof and (ii) the Investors are relying on the representations made by the Company under, and are intended third party beneficiaries of, this Agreement. The term “successors and assigns” as herein used shall not include any purchaser of the Securities by reason merely of such purchase.

11. Governing Law; Submission to Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York, without giving effect to provisions or conflicts of laws which would result in the application of the laws of any other jurisdiction. Except as set forth below, no Proceeding may be commenced, prosecuted or continued in any court other than the courts of the State of New York located in the City and County of New York or in the United States District Court for the Southern District of New York, which courts shall have jurisdiction over the adjudication of such matters, and the Company hereby consents to the jurisdiction of such courts and personal service with respect thereto. The parties hereto hereby consent to personal jurisdiction, service and venue in any court in which any Proceeding arising out of or in any way relating to this Agreement is brought by any third party against the Placement Agent. The parties hereto hereby waive all right to trial by jury in any Proceeding (whether based upon contract, tort or otherwise) in any way arising out of or relating to this Agreement. The parties hereto agree that a final judgment in any such Proceeding brought in any such court shall be conclusive and binding upon the parties hereto and may be enforced in any other courts in the jurisdiction of which such party is or may be subject, by suit upon such judgment.

12. No Fiduciary Relationship. The Company hereby acknowledges and agrees that:

(a) *No Other Relationship.* The Placement Agent has been retained solely to act as the exclusive placement agent in connection with the offering of the Company’s securities. The Company further acknowledges that the Placement Agent is acting pursuant to a contractual relationship created solely by this Agreement entered into on an arm’s length basis and in no event do the parties intend that the Placement Agent act or be responsible as a fiduciary to the Company, its management, stockholders, creditors or any other person in connection with any activity that the Placement Agent may undertake or has undertaken in furtherance of the offering

of the Company's securities, either before or after the date hereof. The Placement Agent hereby expressly disclaims any fiduciary or similar obligations to the Company, either in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions, and the Company hereby confirms its understanding and agreement to that effect.

(b) *Arm's-Length Negotiations.* The price of the Securities set forth in this Agreement was established by the Company following discussions and arms-length negotiations with the purchasers and the Placement Agent, 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) *Absence of Obligation to Disclose.* The Company has been advised that the Placement Agent and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Placement Agent has no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and

(d) *Waiver.* The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Placement Agent with respect to any breach or alleged breach of any fiduciary or similar duty to the Company in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions and agrees that the Placement Agent shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary duty claim to any person asserting a fiduciary duty claim on behalf of the Company, including stockholders, employees or creditors of the Company.

13. **Headings.** The Section headings in this Agreement have been inserted as a matter of convenience of reference and are not a part of this Agreement.

14. **Amendments and Waivers.** No supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. The failure of a party to exercise any right or remedy shall not be deemed or constitute a waiver of such right or remedy in the future. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (regardless of whether similar), nor shall any such waiver constitute a continuing waiver unless otherwise expressly provided.

15. **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. Delivery of an executed counterpart by facsimile shall be effective as delivery of a manually executed counterpart thereof.

16. **Research Analyst Independence.** The Company acknowledges that the Placement Agent's research analysts and research departments are required to be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and that such Placement Agent's research analysts may hold views and make statements or investment recommendations and/or publish research reports with respect to the Company and/or the offering that differ from the views of their respective investment banking divisions. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Placement Agent with respect to any conflict of interest that may arise from the fact that the views expressed by their independent research analysts and research departments may be different from or inconsistent with the views or advice communicated to the Company by such Placement Agent's

investment banking divisions. The Company acknowledges that the Placement Agent is a full service securities firm and as such from time to time, subject to applicable securities laws, rules and regulations, may effect transactions for its own account or the account of its customers and hold long or short positions in debt or equity securities of the Company; *provided, however*, that nothing in this Section 16 shall relieve the Placement Agent of any responsibility or liability they may otherwise bear in connection with activities in violation of applicable securities laws, rules and regulations.

17. **Entire Agreement.** This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof.

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

19. **Effectiveness.** This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

[Signature Page Follows]

If the foregoing is in accordance with your understanding of the agreement between the Company and the Placement Agent, kindly indicate your acceptance in the space provided for that purpose below.

Very truly yours,

ALTIMMUNE, INC.

By /s/ William Enright
Name: William Enright
Title: President & Chief Executive Officer

Confirmed as of the date first above mentioned:

PIPER JAFFRAY & CO.

By /s/ David W. Stadinski
Name: David W. Stadinski
Title: Managing Director

Schedules and Exhibits

Schedule I:	General Use Free Writing Prospectuses
Schedule 2(c):	Significant Subsidiaries
Schedule 2(f):	Equity Capitalization
Schedule 2(zz):	Indebtedness
Exhibit A:	Form of Securities Purchase Agreement
Exhibit B:	Form of Warrant
Exhibit C:	Form of Certificate of Designations
Exhibit D:	List of Directors and Executive Officers Executing Lock-Up Agreements
Exhibit E:	Form of Lock-Up Agreement
Exhibit F:	Pricing Information

Schedule I

General Use Free Writing Prospectuses

None.

Schedule 2(c)

Significant Subsidiaries

List of Subsidiaries

Jurisdiction of Incorporation or Organization

Mustang Merger Sub II LLC (1)

Delaware

Altimune UK Limited (1)

United Kingdom

(1) Wholly owned subsidiary of the Company

Schedule 2(f)

Equity Capitalization

As of the date of the Agreement, the table below sets forth the Company's outstanding Warrants to Purchase Common Stock, Stock Options, and Restricted Shares of Common Stock:

<u>Type of Security</u>	<u>Common Stock Equivalent Shares</u>	<u>Weighted Average Exercise Price</u>	<u>Expiration Date/ Weighted Average Remaining Life</u>
Warrants to Purchase Common Stock	4,658	\$ 16.10	March 30, 2022
Stock Options	1,469,659	\$ 6.94	3.18 years
Restricted Stock	27,688	—	—

Schedule 2(zz)

Indebtedness

1. Altimmune has two non-interest bearing research funding arrangements with Banque Publique d'Investissement (BPI France) entered into in December 2013 that provided its French subsidiary up to €750,000 in research funding in the first arrangement and up to €250,000 in the second arrangement. Altimmune is permitted to draw 50% of the funds upon the signing of the arrangements, an additional 30% contingent upon a financial audit and technical progress report, and the remaining amount to be drawn at the completion of the research and development project being funded by the arrangements.
2. Lease Agreement between ARE-19 Firstfield Road, LLC and the Company (formerly Vaxin Inc.), dated October 28, 2011.
3. Lease Agreement between Financial Corporation and the Company (formerly Vaxin Inc.), dated June 11, 2014. (Toshiba eStudio 2330c color copier/printer)
4. Lease Agreement between ARE-Maryland No. 30, LLC and the Company, dated June 30, 2017.
5. Lease Agreement between CTL Analyzers LLC and the Company, dated May 9, 2017. (ImmunoSpot S6 Universal Analyzer, with Cell counting software)
6. Lease Agreement between Thermo Fisher Financial Services, Inc., dated June 28, 2017. (Block Real-Time PCR System)
7. Altimmune had a secured credit facility from ServisFirst that provided for borrowings up to \$200,000 which matured in June 2015. In January 2015, Altimmune entered into a new secured credit facility with ServisFirst that provides for borrowings up to \$250,000 and matures in April 2018.

Exhibit A

Form of Securities Purchase Agreement

Exhibit B

Form of Warrant

Exhibit C

Certificate of Designations

Exhibit D

**List of Directors and Executive Officers
Executing Lock-Up Agreements**

William Enright
Elizabeth A. Czerepak
David J. Drutz
John M. Gill
Philip L. Hodges
Mitchel B. Sayare
Klaus O. Schafer
Derace L. Schafer

Exhibit E

Form of Lock-Up Agreement

August , 2017

Altimune, Inc.
19 Firstfield Road
Gaithersburg, MD 20878
Telephone: (240) 654-1450
Attention: William Enright, Chief Executive Officer
E-mail: benright@altimmune.com

Re: Altimune, Inc.—Lock-Up Agreement

This Lock-Up Agreement is being delivered to you in connection with the Securities Purchase Agreement (the “**Securities Purchase Agreement**”), dated as of August , 2017 (the “**Subscription Date**”) by and among Altimune, Inc. (the “**Company**”) and the investors party thereto (the “**Buyers**”), with respect to the issuance of (i) shares of Series B Convertible Preferred Stock of the Company, par value \$0.0001 per share (the “**Preferred Shares**”), which are convertible into shares of common stock of the Company, par value \$0.0001 per share (the “**Common Stock**”) pursuant to the terms of the Certificate of Designations, Preferences and Rights of Series B Preferred Shares and (ii) warrants, which are exercisable to purchase shares of Common Stock. Capitalized terms used herein and not otherwise defined herein shall have the respective meanings set forth in the Securities Purchase Agreement.

In order to induce the Buyers to enter into the Securities Purchase Agreement, the undersigned agrees that, commencing on the date hereof and ending on the earlier of (x) the first (1st) anniversary of the Closing Date and (y) the date on which no Preferred Shares are outstanding (the “**Lock-Up Period**”), the undersigned will not, directly or indirectly (including, without limitation, through any entity controlled by the undersigned), (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase, make any short sale or otherwise dispose of or agree to dispose of, directly or indirectly, any shares of Common Stock or Common Stock Equivalents, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities and Exchange Act of 1934, as amended and the rules and regulations of the Securities and Exchange Commission promulgated thereunder with respect to any shares of Common Stock or Common Stock Equivalents owned directly by the undersigned (including holding as a custodian) or with respect to which the undersigned has beneficial ownership within the rules and regulations of the Securities and Exchange Commission (collectively, the “**Undersigned’s Shares**”), or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any of the Undersigned’s Shares, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of shares of Common Stock or other securities, in cash or otherwise, (iii) make any demand for or exercise any right or cause to be filed a registration statement, including any amendments thereto, with respect to the registration of any shares of Common Stock or Common Stock Equivalents or (iv) publicly disclose the intention to do any of the foregoing.

The foregoing restriction is expressly agreed to preclude the undersigned, directly or indirectly (including, without limitation, through any entity controlled by the undersigned), from engaging in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Undersigned's Shares even if the Undersigned's Shares would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include, without limitation, any short sale or any purchase, sale or grant of any right (including, without limitation, any put or call option) with respect to any of the Undersigned's Shares or with respect to any security that includes, relates to, or derives any significant part of its value from the Undersigned's Shares.

Notwithstanding the foregoing, the undersigned may transfer the Undersigned's Shares (a) (i) as a *bona fide* gift or gifts, provided that the donee or donees thereof agree to be bound in writing by the restrictions set forth herein, (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, (iii) issued pursuant to an exchange of Company's options that are out-of-the-money with the Company; provided that any securities issued upon such exchange shall then become subject to the lockup provisions contained in this Agreement or (iv) by operation of law pursuant to a qualified domestic order or in connection with a divorce settlement or other court order, (b) acquired pursuant to the acquisition or exercise of any stock option issued pursuant to the Company's existing stock option plan or omnibus incentive plan, provided that any securities issued upon such acquisition or exercise, as applicable, shall then become subject to the lockup provisions contained in this Agreement, (c) pursuant to a plan, contract or instruction that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B) that was in effect prior to the date hereof provided that such plan, contract or instruction is not amended, modified or changed on or after the Subscription Date or (d) if any affiliate of the undersigned is a corporation, partnership, limited liability company, trust or other business entity, (1) to another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate of the undersigned or (2) as distributions to the partners, limited liability company members or stockholders of such corporation, partnership, limited liability company, trust or other business entity, or holders of similar equity interest in such entity, provided, in each case, that the transferee then becomes subject to the lockup provisions contained in this Agreement. For purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. None of the restrictions set forth in this Lock-Up Agreement shall apply to Common Stock acquired in open market transactions after the date hereof. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent (the "**Transfer Agent**") and registrar against the transfer of the Undersigned's Shares except in compliance with the foregoing restrictions.

In order to enforce this covenant, the Company may impose irrevocable stop-transfer instructions preventing the Transfer Agent from effecting any actions in violation of this Lock-Up Agreement.

The undersigned acknowledges that the execution, delivery and performance of this Lock-Up Agreement is a material inducement to each Buyer to complete the transactions contemplated by the Securities Purchase Agreement and that the Company shall be entitled to specific performance of the undersigned's obligations hereunder. The undersigned hereby represents that the undersigned has the power and authority to execute, deliver and perform this Lock-Up Agreement, that the undersigned has received adequate consideration therefor and that the undersigned will indirectly benefit from the closing of the transactions contemplated by the Securities Purchase Agreement.

The undersigned understands and agrees that this Lock-Up Agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors, and assigns.

This Lock-Up Agreement may be executed in two counterparts, each of which shall be deemed an original but both of which shall be considered one and the same instrument.

This Lock-Up Agreement will be governed by and construed in accordance with the laws of the State of New York, without giving effect to any choice of law or conflicting provision or rule (whether of the State of New York, or any other jurisdiction) that would cause the laws of any jurisdiction other than the State of New York to be applied. In furtherance of the foregoing, the internal laws of the State of New York will control the interpretation and construction of this Lock-Up Agreement, even if under such jurisdiction's choice of law or conflict of law analysis, the substantive law of some other jurisdiction would ordinarily apply.

[Remainder of page intentionally left blank]

Very truly yours,

Exact Name of Shareholder

Authorized Signature

Title

Agreed to and Acknowledged:

ALTIMMUNE, INC.

By: _____
Name:
Title:

Exhibit F

Pricing Information

Number of Shares of Series B Convertible Preferred Stock and Warrants to be Sold: 15,656

Number of Warrant Shares for which Warrants are being issued: 2,345,427

Offering Price: \$940.00 per share of Series B Convertible Preferred Stock and Warrant

Aggregate Placement Agency Fees: \$1,030,164.80

Estimated Net Proceeds to the Company (before transaction expenses): \$13,686,475.20

SECURITIES PURCHASE AGREEMENT

SECURITIES PURCHASE AGREEMENT (the “**Agreement**”), dated as of August 16, 2017, by and among Altimmune, Inc., a Delaware corporation, with headquarters located at 19 Firstfield Road, Suite 200 Gaithersburg, Maryland 20878 (the “**Company**”), and the investors listed on the Schedule of Buyers attached hereto (individually, a “**Buyer**” and collectively, the “**Buyers**”).

WHEREAS:

A. The Company and the Buyers desire to enter into this transaction to purchase the Preferred Shares (as defined below) and Warrants (as defined below) pursuant to the Registration Statement (as defined below) which is currently effective, has at least \$100,000,000 of initial offering price of unallocated securities available for sale as of the date hereof and has been declared effective in accordance with the Securities Act of 1933, as amended (the “**1933 Act**”), by the United States Securities and Exchange Commission (the “**SEC**”).

B. The Company has authorized a new series of convertible preferred stock of the Company designated as Series B Convertible Preferred Stock, the terms of which are set forth in the certificate of designations for such series of preferred stock (the “**Certificate of Designations**”) in the form attached hereto as Exhibit A (together with any convertible preferred shares issued in replacement thereof in accordance with the terms thereof, the “**Preferred Shares**”), which Preferred Shares shall be convertible or redeemable into the Company’s voting common stock, par value \$0.0001 per share (the “**Common Stock**”), in accordance with the terms of the Certificate of Designations (all shares of Common Stock issued or issuable pursuant to the terms of the Certificate of Designations are referred to herein collectively, as the “**Conversion Shares**”), which Conversion Shares shall be issued pursuant to the Registration Statement or, if such Registration Statement is not available at the time of issuance of such Conversion Shares, as securities exempt from registration pursuant to Section 3(a)(9) of the 1933 Act.

C. Each Buyer wishes to purchase, and the Company wishes to sell, upon the terms and conditions stated in this Agreement, at the Closing (as defined below), (i) that aggregate number of Preferred Shares set forth opposite such Buyer’s name in column (3) of the Schedule of Buyers attached hereto (which aggregate number for all Buyers together shall be 15,655,714) and, (ii) Warrants, in substantially the form attached hereto as Exhibit B (the “**Warrants**”), representing the right to acquire up to that number of shares of Common Stock set forth opposite such Buyer’s name in column (4) of the Schedule of Buyers attached hereto (as exercised, collectively, the “**Warrant Shares**”). All Warrant Shares shall be issued pursuant to the Registration Statement or, if such Registration Statement is not available at the time of issuance of such Warrant Shares, upon a “cashless exercise” pursuant to the terms of the Warrants, as securities exempt from registration pursuant to Section 3(a)(9) of the 1933 Act.

D. The Preferred Shares, the Conversion Shares, the Warrants and the Warrant Shares collectively are referred to herein as the “**Securities**”.

NOW, THEREFORE, the Company and each Buyer hereby agree as follows:

1. PURCHASE AND SALE OF PREFERRED SHARES AND WARRANTS.

(a) Purchase of Preferred Shares and Warrants. Subject to the satisfaction (or waiver) of the conditions set forth in Sections 6 and 7 below, the Company shall issue and sell to each Buyer, and each Buyer, severally, but not jointly, agrees to purchase from the Company on the Closing Date (as defined below), (i) the number of Preferred Shares in an aggregate amount as is set forth opposite such Buyer's name in column (3) of the Schedule of Buyers attached hereto and (ii) Warrants to acquire up to that number of Warrant Shares as is set forth opposite such Buyer's name in column (4) of the Schedule of Buyers attached hereto (the "**Closing**").

(b) Purchase Price. The purchase price for the Preferred Shares and the related Warrants to be purchased by each Buyer at the Closing shall be the amount set forth opposite such Buyer's name in column (5) of the Schedule of Buyers attached hereto (less, in the case of Hudson Bay Master Fund Ltd. (the "**Lead Investor**"), any amounts withheld pursuant to Section 4(f)) (the "**Purchase Price**").

(c) Closing Date. The date and time of the Closing (the "**Closing Date**") shall be 10:00 a.m., New York City time, on the date hereof (or such other date and time as is mutually agreed to by the Company and each Buyer) after notification of satisfaction (or waiver) of the conditions to the Closing set forth in Sections 6 and 7 (other than those conditions which by their nature are to be satisfied at the Closing, but subject to such satisfaction) below at the offices of Schulte Roth & Zabel LLP, 919 Third Avenue, New York, New York 10022. The Closing may also be undertaken remotely by electronic transfer of Closing documentation.

(d) Form of Payment. On the Closing Date, (i) each Buyer shall pay its respective Purchase Price (less, in the case of the Lead Investor, any amounts withheld pursuant to Section 4(f)) to the Company for the Preferred Shares and the related Warrants to be issued and sold to such Buyer at the Closing by wire transfer of immediately available funds in accordance with the Company's written wire instructions and (ii) the Company shall deliver to each Buyer (x) the number of Preferred Shares (denominated as such Buyer shall request) set forth opposite such Buyer's name in column (3) of the Schedule of Buyers attached hereto and (y) Warrants (denominated as such Buyer shall request) such Buyer is purchasing hereunder pursuant to which such Buyer shall have the right to acquire up to such number of Warrant Shares as is set forth opposite such Buyer's name in column (4) of the Schedule of Buyers attached hereto, in each case duly executed on behalf of the Company and registered in the name of such Buyer or its designee.

2. BUYER'S REPRESENTATIONS AND WARRANTIES. Each Buyer, severally and not jointly, represents and warrants with respect to only itself that, as of the date hereof and as of the Closing Date:

(a) Validity; Enforcement. This Agreement has been duly and validly authorized, executed and delivered on behalf of such Buyer and shall constitute the legal, valid and binding obligations of such Buyer enforceable against such Buyer in accordance with its terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation and other similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies.

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

(c) Residency. Such Buyer is a resident of the jurisdiction specified below its address on the Schedule of Buyers.

(d) Certain Trading Activities. Such Buyer has not directly or indirectly, nor has any Person acting on behalf of or pursuant to any understanding with such Buyer, engaged in any transactions in the securities of the Company, including, without limitation, short sales or “derivative” transactions involving the Company’s securities, or any other action designed to cause or to result in the manipulation of the price of any security of the Company during the period commencing as of July 22, 2017 and ending on the date hereof or on the Closing Date, as applicable.

(e) Information. Such Buyer and its advisors, if any, have been furnished with all materials relating to the business, finances and operations of the Company and materials relating to the offer and sale of the Securities which have been requested by such Buyer. Such Buyer and its advisors, if any, have been afforded the opportunity to ask questions of the Company. Such Buyer understands that its investment in the Securities involves a high degree of risk. Such Buyer has sought such accounting, legal and tax advice as it has considered necessary to make an informed investment decision with respect to its acquisition of the Securities.

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

(g) Securities Law Filings. Such Buyer acknowledges and agrees that it may have certain reporting obligations pursuant to applicable securities laws, including without limitation, Section 13 and Section 16 of the 1934 Act, and that such Buyer shall be solely responsible for ensuring compliance with such laws.

(h) No Other Representations. Such Buyer acknowledges and agrees that neither the Company nor any other Person makes or has made any representations and warranties about or relating to the Company or with respect to the transactions contemplated by this Agreement other than those representations and warranties of the Company specifically set forth in Section 3, and such Buyer has not relied on, and expressly disclaims any reliance on, any representation,

warranty or other information about or relating to the Company or with respect to the transactions contemplated by this Agreement except for the representations and warranties of the Company set forth in Section 3.

3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY. The Company represents and warrants to each of the Buyers that, as of the date hereof and as of the Closing Date:

(a) Shelf Registration Statement.

(i) The Company has prepared and filed in conformity with the requirements of the 1933 Act and the published rules and regulations thereunder (the “**Rules and Regulations**”) adopted by the SEC a “shelf” registration statement on Form S-3 (No. 333-217034), which became effective on April 6, 2017, including a base prospectus, (the “**Base Prospectus**”) relating to Common Stock, preferred stock or warrants of the Company that may be sold from time to time by the Company, in accordance with Rule 415 of the 1933 Act, and such amendments thereof as may have been required to the date of this Agreement. The term “**Registration Statement**” as used in this Agreement means such registration statement, including all exhibits, financial schedules and all documents and information deemed to be part of the Registration Statement by incorporation by reference or otherwise, as amended from time to time, including the information (if any) contained in the form of final prospectus filed with the SEC pursuant to Rule 424(b) of the Rules and Regulations and deemed to be part thereof at the time of effectiveness pursuant to Rules 430A and 430B of the Rules and Regulations. The term “**Prospectus**” means the Base Prospectus, and any amendments or further supplements to such prospectus filed with the SEC, and including, without limitation, the final prospectus supplement (the “**Prospectus Supplement**”), filed pursuant to and within the limits described in Rule 424(b) with the SEC in connection with the proposed sale of the Securities contemplated by this Agreement through the date of such prospectus supplement. Unless otherwise stated herein, any reference herein to the Registration Statement and the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein, including pursuant to Item 12 of Form S-3 under the 1933 Act, which were filed under the 1934 Act, on or before the date hereof or are so filed hereafter. Any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include any such document filed or to be filed under the 1934 Act after the date of the Registration Statement or Prospectus, as the case may be, and deemed to be incorporated therein by reference.

(ii) The Company was at the time of the filing of the Registration Statement eligible to use Form S-3. As of the date of this Agreement, the Company is eligible to use Form S-3 under the 1933 Act and it meets the transaction requirements with respect General Instruction I.B.1 of Form S-3. The Company filed with the SEC the Registration Statement on such Form S-3, including a Base Prospectus, for registration under the 1933 Act of the offering and sale of the Securities. When the Registration Statement or any amendment thereof or supplement thereto was or is declared effective and as of the date of the most recent amendment to the Registration Statement, it (i) complied or will comply, in all material respects, with the requirements of the 1933 Act and the Rules and Regulations and the 1934 Act and the rules and regulations of the SEC thereunder and (ii) did not or will not, contain any untrue statement of a

material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein not misleading. When any Prospectus was first filed with the SEC (whether filed as part of the Registration Statement or any amendment thereto or pursuant to Rule 424 of the Rules) and when any amendment thereof or supplement thereto was first filed with the SEC, such Prospectus as amended or supplemented complied in all material respects with the applicable provisions of the 1933 Act and the Rules and Regulations and did not or will not, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein not misleading. Notwithstanding the foregoing, the Company makes no representations or warranties as to information contained in or omitted from any Prospectus, in reliance upon, and in conformity with, written information furnished to the Company by or on behalf of the Buyers, specifically for use therein.

(b) Prospectus. As of the Applicable Time (as defined below) and as of the Closing Date, neither (x) the General Use Free Writing Prospectus(es) (as defined below) issued at or prior to the Applicable Time, all considered together (collectively, the “**General Disclosure Package**”), nor (y) any individual Limited Use Free Writing Prospectus (as defined below), when considered together with the General Disclosure Package, included, includes or will include any untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. As used in this subsection and elsewhere in this Agreement:

(i) “**Applicable Time**” means 5:30 p.m. (New York time) on the date of this Agreement or such other time as agreed to by the Company and the Buyers.

(ii) “**Issuer Free Writing Prospectus**” means any “issuer free writing prospectus,” as defined in Rule 433 under the 1933 Act, relating to the Securities in the form filed or required to be filed with the SEC or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g) under the 1933 Act.

(iii) “**General Use Free Writing Prospectus**” means any Issuer Free Writing Prospectus that is identified on Schedule I to this Agreement.

(iv) “**Limited Use Free Writing Prospectus**” means any Issuer Free Writing Prospectus that is not a General Use Free Writing Prospectus.

(c) Organization. The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the State of Delaware, with corporate power and authority to own or lease its properties and conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus. The Company has no significant subsidiaries (as such term is defined in Rule 1-02 of Regulation S-X promulgated by the SEC) other than as listed on Schedule 3(c) hereto (collectively, the “**Subsidiaries**”). Each of the Subsidiaries has been duly organized and is validly existing as an entity in good standing under the laws of the jurisdiction of its organization, with corporate power and authority to own or lease its properties and conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus. The Company and each of the Subsidiaries are

duly qualified to transact business in all jurisdictions in which the conduct of their business requires such qualification, except where the failure to be so qualified would not reasonably be expected to result in a Material Adverse Effect. For purposes of this Agreement, “**Material Adverse Effect**” shall mean any event or occurrence that has a material adverse effect on (i) the business, properties, assets, liabilities, operations, results of operations, condition (financial or otherwise) or prospects of the Company and of the Subsidiaries, individually or taken as a whole, whether or not occurring in the ordinary course of business, (ii) on the authority or ability of the Company to perform its obligations under the Transaction Documents (as defined below) or (iii) the legality, validity, binding effect or enforceability of any of the Transaction Documents; provided that, for purposes of this Section 3, none of the following shall be taken into account in determining whether a Material Adverse Effect has occurred: (1) events or occurrences generally affecting the economy or the debt, credit or securities markets, (2) any acts of God, national disaster, or outbreak or escalation of hostilities or declared or undeclared acts of war or terrorism, (3) changes in laws or regulations, (4) changes in GAAP (or interpretations thereof) or (5) events or occurrences generally affecting the industry in which the Company conducts its business, except, in each case, to the extent such events or occurrences have a disproportionate impact on the Company and its Subsidiaries, taken as a whole. The outstanding shares of capital stock of each of the Subsidiaries have been duly authorized and validly issued, are fully paid and non-assessable and are owned by the Company or another Subsidiary free and clear of all liens, encumbrances and equities and claims, except as described in the Registration Statement; and no options, warrants or other rights to purchase, agreements or other obligations to issue or other rights to convert any obligations into shares of capital stock or ownership interests in the Subsidiaries are outstanding.

(d) Authorization; Enforcement; Validity. The Company has the requisite corporate power and authority to enter into and perform its obligations under this Agreement, the Certificate of Designations, the Warrants, the Irrevocable Transfer Agent Instructions (as defined in Section 5(b)), the Lock-Up Agreements (as defined in Section 3(yy)), the Voting Agreement (as defined in Section 4(t)) and each of the other agreements entered into by the parties hereto in connection with the transactions contemplated by this Agreement (collectively, the “**Transaction Documents**”) and to issue the Securities in accordance with the terms hereof and thereof. The execution and delivery of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby, including, without limitation, the issuance of the Preferred Shares and the Warrants, the reservation for issuance and the issuance of the Conversion Shares issuable pursuant to the terms of the Certificate of Designations and the reservation for issuance and the issuance of the Warrant Shares issuable upon exercise of the Warrants have been duly authorized by the Company’s Board of Directors, and, except as expressly set forth in the Transaction Documents, no further filing, consent, or authorization is required by the Company’s Board of Directors or its stockholders. This Agreement and the other Transaction Documents have been duly executed and delivered by the Company, and constitute the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their respective terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally, the enforcement of applicable creditors’ rights and remedies. As of immediately prior to the Closing, the Certificate of Designations in the form attached hereto as Exhibit A has been filed with the Secretary of State of the State of Delaware and is in full force and effect, enforceable against the Company in accordance with its terms and has not been amended.

(e) Issuance of Securities. The outstanding shares of Common Stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable; the Securities to be issued and sold by the Company have been duly authorized and when issued and paid for as contemplated herein in accordance with the terms of the Transaction Documents will be free from all taxes, liens and charges with respect to the issue thereof, validly issued, fully paid and non-assessable; and no preemptive rights of stockholders exist with respect to any of the Securities or the issue and sale thereof. A number of shares of Common Stock shall have initially been duly authorized and reserved for issuance which equals at least 150% of the maximum number of shares of Common Stock issuable (i) pursuant to the terms of the Certificate of Designations (without taking into account any limitations on the conversion or redemption of the Preferred Shares set forth in the Certificate of Designations) and (ii) upon exercise of the Warrants (without taking into account any limitations on the exercise of the Warrants set forth in the Warrants) (150% of such aggregate number of shares in clauses (i) and (ii), the “**Required Reserve Amount**”). Except as expressly contemplated by the Transaction Documents, 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, other than those which have been waived or satisfied, for or relating to the registration of any shares of Common Stock. Upon issuance pursuant to the terms of the Certificate of Designations or exercise in accordance with the Warrants, as the case may be, the Conversion Shares and Warrant Shares, respectively, will be validly issued, fully paid and nonassessable and free from all preemptive or similar rights, taxes, liens and charges with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock.

(f) Equity Capitalization. As of the date hereof and as of the Closing Date, the Company has or will have, as the case may be, an authorized, issued and outstanding capitalization as is set forth in the Registration Statement and the Prospectus (subject, in each case, to the issuance of shares of Common Stock upon exercise of stock options and warrants disclosed as outstanding in the Registration Statement and the Prospectus and the grant or issuance of options or shares under existing equity compensation plans or stock purchase plans described in the Registration Statement or the Prospectus), and such authorized capital stock conforms to the description thereof set forth in the Registration Statement and the Prospectus. All of the Securities conform to the description thereof contained in the Registration Statement and the Prospectus. The form of certificates for the Preferred Shares, the Conversion Shares, the Warrants and the Warrant Shares, as applicable, will conform to the corporate law of the jurisdiction of the Company’s incorporation. As of the date hereof, immediately prior to the transactions contemplated by this Agreement, the authorized capital stock of the Company consists of (1) 100,000,000 shares of Common Stock, of which 15,422,913 shares are issued and outstanding, 2,705,307 shares are reserved for issuance pursuant to the Company’s stock option and purchase plans and 4,658 shares are reserved for issuance pursuant to securities (other than the aforementioned options and the Warrants) exercisable or exchangeable for, or convertible into, Common Stock, and (2) 1,000,000 shares of preferred stock, par value \$0.0001 per share, none of which are issued and outstanding. All of such outstanding shares have been, or upon issuance will be, validly issued and are fully paid and nonassessable. Except as disclosed on Schedule 3(f) hereto or as expressly contemplated by the Transaction Documents, (i) none of the

Company's capital stock is subject to preemptive rights or any other similar rights or any liens or encumbrances suffered or permitted by the Company; (ii) there are no outstanding options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, or exercisable or exchangeable for, any shares of capital stock of the Company or any of its Subsidiaries, or contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to issue additional shares of capital stock of the Company or any of its Subsidiaries or options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, or exercisable or exchangeable for, any shares of capital stock of the Company or any of its Subsidiaries; (iii) there are no agreements or arrangements under which the Company or any of its Subsidiaries is obligated to register the sale of any of their securities under the 1933 Act; (iv) there are no outstanding securities or instruments of the Company or any of its Subsidiaries which contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to redeem a security of the Company or any of its Subsidiaries; (v) there are no securities or instruments binding on the Company or any of its Subsidiaries containing anti-dilution or similar provisions that will be triggered by the issuance of the Securities; (vi) the Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement; and (vii) the Company and its Subsidiaries have no liabilities or obligations required to be disclosed in the SEC Documents (as defined in Section 3(ww)) but not so disclosed in the SEC Documents, other than those incurred in the ordinary course of the Company's or any of its Subsidiaries' respective businesses and which, individually or in the aggregate, do not or would not have a Material Adverse Effect. Schedule 3(f) set forth the material terms of any outstanding warrants of the Company, including, without limitation, the exercise price, put rights or other special features and expiration date thereof.

(g) Disclosure.

(i) The SEC has not issued an order preventing or suspending the use of any Issuer Free Writing Prospectus or the Prospectus relating to the proposed offering of the Securities, and no proceeding for that purpose or pursuant to Section 8A of the 1933 Act has been instituted or, to the Company's knowledge, threatened by the SEC. The Registration Statement conforms, and the Prospectus and any amendments or supplements thereto will conform to the requirements of the 1933 Act and the Rules and Regulations. The documents incorporated, or to be incorporated, by reference in the Prospectus, at the time filed with the SEC conformed in all material respects, or will conform in all respects, to the requirements of the Securities Exchange Act of 1934, as amended (the "**1934 Act**"), or the 1933 Act, as applicable, and the Rules and Regulations. The Registration Statement and any amendments and supplements thereto do not contain, and on the Closing Date will not contain, any untrue statement of a material fact and do not omit, and on the Closing Date will not omit, to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus and any amendments and supplements thereto do not contain, and on the Closing Date will not contain, any untrue statement of a material fact; and do not omit, and on the Closing Date will not omit, to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(ii) Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Securities or until any earlier date that the Company notified or notifies the Buyers as described in the next sentence, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any document incorporated by reference therein that has not been superseded or modified. 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 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 light of the circumstances, not misleading, the Company has notified or will notify promptly the Buyers so that any use of such Issuer Free Writing Prospectus may cease until it is amended or supplemented.

(iii) The Company confirms that neither it nor any other Person acting on its behalf has provided any of the Buyers or their agents or counsel with any information that constitutes or would reasonably be expected to constitute material, nonpublic information concerning the Company or any of its Subsidiaries that will not be included in the 8-K Filing (as defined in Section 4(j)). The Company understands and confirms that each of the Buyers will rely on the foregoing representations in effecting transactions in securities of the Company. Each press release issued by the Company or any of its Subsidiaries during the twelve (12) months preceding the date hereof did not at the time of release contain any untrue statement of material fact or omit to state a material fact required to be stated therein or necessary in order to make such statements therein, in the light of the circumstances in which they were made, not misleading. The Company does not have any agreement or understanding with any Buyer with respect to the transactions contemplated by the Transaction Documents other than as specified in the Transaction Documents. For the purpose of this Agreement, "**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization and a government or any department or agency thereof.

(h) Offering Materials. The Company has not, directly or indirectly, distributed and will not distribute any offering material in connection with the offering and sale of the Securities other than the Prospectus, any Issuer Free Writing Prospectus and other materials, if any, permitted under the 1933 Act. The Company will file with the SEC all Issuer Free Writing Prospectuses in the time required under Rule 433(d) under the 1933 Act. The Company has satisfied or will satisfy the conditions in Rule 433 under the 1933 Act to avoid a requirement to file with the SEC any electronic road show.

(i) Ineligible Issuer Status. At the time of filing the Registration Statement and (ii) as of the date hereof (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an "ineligible issuer" (as defined in Rule 405 under the 1933 Act, without taking into account any determination by the SEC pursuant to Rule 405 under the 1933 Act that it is not necessary that the Company be considered an ineligible issuer), including, without limitation, for purposes of Rules 164 and 433 under the 1933 Act with respect to the offering of the Securities as contemplated by the Registration Statement.

(j) Financial Statements. The consolidated financial statements of the Company and the Subsidiaries, together with related notes and schedules as set forth or incorporated by

reference in the Registration Statement, the General Disclosure Package and the Prospectus, present fairly in all material respects the financial position of the Company and the consolidated Subsidiaries and the results of operations and cash flows of the Company and the consolidated Subsidiaries, at the indicated dates and for the indicated periods. Such consolidated financial statements and related schedules have been prepared in accordance with United States generally accepted principles of accounting consistently applied throughout the periods involved (“GAAP”), except as disclosed therein, and all adjustments necessary for a fair presentation of results for such periods have been made. The summary and selected consolidated financial and statistical data included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus presents fairly in all material respects the information shown therein, at the indicated dates and for the indicated periods, and such data has been compiled on a basis consistent with the financial statements presented therein and the books and records of the Company. All disclosures, if any, contained in the Registration Statement, the General Disclosure Package and the Prospectus regarding “non-GAAP financial measures” (as such term is defined by the Rules and Regulations) comply in all material respects with Regulation G of the 1934 Act and Item 10 of Regulation S-K under the 1933 Act, to the extent applicable. The Company and the Subsidiaries do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations or any “variable interest entities” within the meaning of Financial Accounting Standards Board Interpretation No. 46), not disclosed in the Registration Statement, the General Disclosure Package and the Prospectus. There are no financial statements (historical or pro forma) that are required to be included in the Registration Statement, the General Disclosure Package or the Prospectus that are not included as required.

(k) Accountants. Each of Ernst & Young LLP, BDO USA, LLP and BDO LLP, who have certified certain of the financial statements filed with the SEC as part of, or incorporated by reference in, the Registration Statement, the General Disclosure Package and the Prospectus, has represented to the Company that it is an independent registered public accounting firm with respect to the Company and the Subsidiaries within the meaning of the 1933 Act and the applicable Rules and Regulations and the Public Company Accounting Oversight Board (United States) (the “PCAOB”).

(l) Weaknesses or Changes in Internal Accounting Controls. Neither the Company nor any of the Subsidiaries is aware of (i) any material weakness in its internal control over financial reporting or (ii) change in internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

(m) Sarbanes-Oxley. Solely to the extent that the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated by the SEC and The NASDAQ Global Market (the “Principal Market”), if applicable, thereunder (collectively, the “Sarbanes-Oxley Act”) has been applicable to the Company, there is and has been no failure on the part of the Company to comply in all respects with any provision of the Sarbanes-Oxley Act. The Company has taken all necessary actions to ensure that it is in compliance in all respects with all provisions of the Sarbanes-Oxley Act that are in effect with respect to which the Company is required to comply and is actively taking steps to ensure that it will be in compliance with the other provisions of the Sarbanes-Oxley Act which will become applicable to the Company.

(n) Litigation. There is no action, suit, claim or proceeding pending or, to the knowledge of the Company, threatened against the Company or any of the Subsidiaries before any court or administrative agency or otherwise which if determined adversely to the Company or any of the Subsidiaries would have, individually or in the aggregate, a Material Adverse Effect, except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus.

(o) Title. The Company and the Subsidiaries have good and marketable title to all of the material properties and assets reflected in the consolidated financial statements hereinabove described or described in the Registration Statement, the General Disclosure Package and the Prospectus, subject to no lien, mortgage, pledge, charge or encumbrance of any kind except those reflected in such financial statements or described in the Registration Statement, the General Disclosure Package and the Prospectus or which are not material in amount or would not materially interfere with the use to be made of such properties or assets. The Company and the Subsidiaries occupy their leased properties under valid and binding leases conforming in all material respects to the description thereof set forth in the Registration Statement, the General Disclosure Package and the Prospectus.

(p) Tax Status. The Company and each of its Subsidiaries (i) has timely made or filed all material foreign, federal and state income tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has timely paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations, except those being contested in good faith and (iii) has set aside on its books provision reasonably adequate for the payment of all taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company and its Subsidiaries know of no basis for any such claim.

(q) Absence of Certain Changes. Since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package and the Prospectus, as each may be amended or supplemented, there has not been any Material Adverse Effect and there has not been any material transaction entered into by the Company or the Subsidiaries, including, without limitation, (i) declaration or payment of any dividends, (ii) sale of any assets, individually or in the aggregate, in excess of \$250,000 or (iii) any capital expenditures, individually or in the aggregate, in excess of \$250,000, other than transactions in the ordinary course of business and transactions described in the Registration Statement, the General Disclosure Package and the Prospectus, as each may be amended or supplemented. The Company and the Subsidiaries have no material contingent obligations which are not disclosed in the Company's consolidated financial statements which are included in the Registration Statement, the General Disclosure Package and the Prospectus. Neither the Company nor any of its Subsidiaries has taken any steps to seek protection pursuant to any bankruptcy law nor does the Company have any knowledge or reason to believe that its creditors intend to initiate involuntary bankruptcy proceedings or any actual knowledge of any fact that would reasonably lead a creditor to do so. The Company and its Subsidiaries, individually and on a consolidated basis, are not as of the date hereof, and after giving effect to the transactions contemplated hereby to occur at the Closing, will not be Insolvent (as defined below). For purposes of this Agreement, (x) "**Insolvent**" means, with respect to any Person, (i) the present fair saleable value

of such Person's assets is less than the amount required to pay such Person's total Indebtedness (as defined in Section 3(z)), (ii) such Person is unable to pay its debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured, or (iii) such Person intends to incur or believes that it will incur debts that would be beyond its ability to pay as such debts mature.

(r) No Conflicts. Neither the Company nor any of the Subsidiaries is, or with the giving of notice or lapse of time or both, will be after giving effect to the execution, delivery and performance of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Securities), (i) in violation of its certificate of incorporation, by-laws, any certificate of designations or other organizational documents or (ii) in violation of or in default (or an event which with notice or lapse of time or both would become a default) in any respect under, or give to others any rights of termination, amendment, acceleration or cancellation of under any agreement, indenture, mortgage, deed of trust, lease, contract, indenture or other agreement or instrument or obligation to which the Company or any Subsidiary is a party or by which the Company or any Subsidiary, or any of their respective properties, is bound or (iii) in violation of any law, rule, regulation, order, judgment, writ or decree of any court applicable to the Company or any of its Subsidiaries or by which any property or asset of the Company or any of its Subsidiaries is bound or affected or of any government, regulatory body or administrative agency or other governmental body having jurisdiction over the Company or any of its Subsidiaries (including U.S. federal and state securities laws and regulations and the rules and regulations of the Principal Market applicable to the Company or any of its Subsidiaries), except in the case of clauses (ii) and (iii), for such violations, conflicts, breaches or defaults which would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(s) Contracts. There is no document, contract or other agreement required to be described in the Registration Statement or Prospectus or to be filed as an exhibit to the Registration Statement which is not described or filed as required by the 1933 Act or the Rules and Regulations. Each description of a contract, document or other agreement in the Registration Statement and the Prospectus accurately reflects in all material respects the terms of the underlying contract, document or other agreement. Each contract, document or other agreement described in the Registration Statement and Prospectus or listed in the exhibits to the Registration Statement or incorporated by reference is in full force and effect and is valid and enforceable by and against the Company in accordance with its terms (except as rights to indemnity and contribution thereunder may be limited by federal or state securities laws and matter of public policy and except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and by general equitable principle). Neither the Company nor any of its Subsidiaries nor, to the Company's knowledge, any other party is in default in the observance or performance of any term or obligation to be performed by it under any such agreement or any other agreement or instrument to which the Company or its Subsidiaries is a party or by which the Company or its Subsidiaries or their respective properties or businesses may be bound, and no event has occurred which with notice or lapse of time or both would constitute such a default, in any such case in which the default, non-performance or event, individually or in the aggregate, would have a Material Adverse Effect.

(t) Regulatory Approvals. Each approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body necessary in connection with the execution and delivery by the Company of this Agreement and the consummation of the transactions herein contemplated (except such additional steps as may be required by the SEC, the Financial Industry Regulatory Authority, Inc. (the “**FINRA**”) or such additional steps as may be required under state securities or Blue Sky laws) has been obtained or made and is in full force and effect.

(u) Conduct of Business. Neither the Company nor any of its Subsidiaries is in violation of any term of or in default under its Certificate of Incorporation, any certificate of designations, preferences or rights of any other outstanding series of preferred stock of the Company or any of its Subsidiaries or bylaws or their organizational charter, certificate of formation or certificate of incorporation or bylaws, respectively. Neither the Company nor any of its Subsidiaries is in violation of any judgment, decree or order or any statute, ordinance, rule or regulation applicable to the Company or its Subsidiaries, except in all cases for possible violations which could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has satisfied all eligibility requirements necessary to enable its Common Stock to be listed or quoted on one or more Eligible Markets (as defined in the Warrants). During the two (2) years prior to the date hereof, (i) the Common Stock has been listed or designated for quotation on the Principal Market or another Eligible Market, (ii) trading in the Common Stock has not been suspended by the SEC or the Principal Market and (iii) the Company has received no communication, written or oral, from the SEC or the Principal Market (or other Eligible Market on which the Common Stock was previously listed) regarding the suspension or delisting of the Common Stock from such Principal Market or other Eligible Market. The Company and its Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct their respective businesses, except where the failure to possess such certificates, authorizations or permits would not have, individually or in the aggregate, a Material Adverse Effect, and neither the Company nor any such Subsidiary has received any written notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit. Without limiting the generality of the foregoing, neither the Company nor any of its Subsidiaries is in violation of any of the rules, regulations or requirements of the Principal Market and has no knowledge of any facts or circumstances that would reasonably lead to delisting or suspension of the Common Stock by the Principal Market.

(v) Intellectual Property. Except as described in the Registration Statement or in any document incorporated by reference therein or as would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect: (i) the Company and each of the Subsidiaries hold all material licenses, certificates and permits from governmental authorities which are necessary for and material to the conduct of their businesses in the manner in which they are currently being conducted; (ii) the Company and the Subsidiaries each own or possess the right to use all patents, patent rights, trademarks, trade names, service marks, service names, copyrights, know-how (including trade secrets and other unpatented and unpatentable proprietary or confidential information, systems or procedures) and other intellectual property rights (“**Intellectual Property**”) necessary to carry on their business in all material respects in the manner in which it is being currently conducted; and (iii) none of the Company’s or its Subsidiaries’ Intellectual Property that is necessary to carry on their business in the manner in

which it is being currently conducted has expired, terminated or been abandoned or are expected to expire, terminate or be abandoned, within three years from the date of this Agreement. The Company has taken commercially reasonable steps to secure ownership interests in Intellectual Property created for it by any contractors. There are no outstanding options, licenses or agreements of any kind relating to the Intellectual Property of the Company that are required to be described in the Registration Statement, the General Disclosure Package and the Prospectus and are not described therein in all material respects. The Company is not a party to or bound by any options, licenses or agreements with respect to the Intellectual Property of any other person or entity that are required to be set forth in the Prospectus and are not described therein in all material respects. Except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, (x) none of the Intellectual Property used by the Company and necessary to the Company's business as currently conducted has been obtained or is being used by the Company in violation of any contractual obligation binding on the Company or, to the Company's knowledge, any of its officers, directors or employees or, to the Company's knowledge, otherwise in violation of the rights of any persons; to (y) the Company's knowledge, neither the Company nor any of the Subsidiaries has infringed any Intellectual Property rights of any other person or entity; and (z) the Company has not received any written communications alleging that the Company has violated, infringed or conflicted with any of the Intellectual Property of any other person or entity. The Company knows of no infringement by others of Intellectual Property owned or licensed by the Company and which is necessary for and material to its business as currently conducted. The Company and each of its Subsidiaries have taken commercially reasonable measures to protect the secrecy and confidentiality of their Intellectual Property.

(w) Manipulation of Prices. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken or may take, directly or indirectly, any action designed to cause or to result, or that would reasonably be expected to cause or result, in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) other than the Agent (as defined in Section 3(kk)), sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the Securities, or (iii) other than the Agent, paid or agreed to pay to any person any compensation for soliciting another to purchase any other securities of the Company.

(x) Investment Company Act. Neither the Company nor any of its Subsidiaries is, and upon consummation of the sale of the Securities will not be, an "investment company," an affiliate of an "investment company," a company controlled by an "investment company" or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company" as such terms are defined in the Investment Company Act of 1940, as amended.

(y) Internal Accounting Controls.

(i) The Company and each of the Subsidiaries 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 and liabilities; (iii) access to assets or incurrence of liabilities is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets and liabilities is compared with existing assets and liabilities at reasonable intervals and appropriate action is taken with respect to any differences.

(ii) The Company has established and maintains “disclosure controls and procedures” (as defined in Rules 13a-15(e) and 15d-15(e) under the 1934 Act); the Company’s “disclosure controls and procedures” are effective in ensuring that all information (both financial and non-financial) required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, 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 1934 Act is accumulated and communicated to the Company’s management, including its principal executive officer or officers and its principal financial officer or officers, as appropriate, to allow timely decisions regarding required disclosure. During the twelve months prior to the date hereof neither the Company nor any of its Subsidiaries has received any notice or correspondence from any accountant relating to any material weakness in any part of the system of internal accounting controls of the Company or any of its Subsidiaries.

(z) Industry and Market Data. The statistical, industry-related and market-related data included in the Registration Statement, the General Disclosure Package and the Prospectus are based on or derived from sources which the Company reasonably and in good faith believes are reliable and accurate, and such data agree in all material respects with the sources from which they are derived.

(aa) Compliance with Anti-Money Laundering Laws. The operations of the Company and its Subsidiaries are and have been conducted at all times in material compliance with applicable financial recordkeeping and reporting requirements and all other applicable U.S. and non-U.S. anti-money laundering laws and regulations, including, but not limited to, those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the USA Patriot Act of 2001 and the applicable money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**Anti-Money Laundering Laws**”), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its Subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(bb) No Conflicts with Sanctions Laws. Neither the Company nor any of the Subsidiaries has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law which violation is required to be disclosed in the Prospectus. Neither the Company nor any of its Subsidiaries, nor any director, officer, employee or affiliate, nor, to the Company’s knowledge, any agent or other person associated with or acting on behalf of the Company or any of its Subsidiaries or affiliates is, or is directly or indirectly owned or controlled by, a Person that is currently the subject or the target of any sanctions administered or enforced by the U.S. government (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury (“**OFAC**”) or the U.S. Departments of State or Commerce and including, without limitation, the designation as a

“specially designated national” or “blocked person”), the United Nations Security Council (“UNSC”), the European Union, Her Majesty’s Treasury (“HMT”) or any other relevant sanctions authority (collectively, “Sanctions”). Neither the Company nor any of its Subsidiaries are located, organized or resident in a country or territory that is the subject or target of a comprehensive embargo or Sanctions prohibiting trade with the country or territory, including, without limitation, Crimea, Cuba, Iran, North Korea, Sudan and Syria (each, a “Sanctioned Country”). No action of the Company or any of its Subsidiaries in connection with (i) the execution, delivery and performance of this Agreement and the other Transaction Documents, (ii) the issuance and sale of the Securities or (iii) the direct or indirect use of proceeds from the Securities or the consummation of any other transaction contemplated hereby or by the other Transaction Documents or the fulfillment of the terms hereof or thereof, will result in the proceeds of the transactions contemplated hereby and by the other Transaction Documents being used, or loaned, contributed or otherwise made available, directly or indirectly, to any Subsidiary, joint venture partner or other person or entity, for the purpose of (1) unlawfully funding or facilitating any activities of or business with any person that, at the time of such funding or facilitation, is the subject or target of Sanctions, (2) unlawfully funding or facilitating any activities of or business in any Sanctioned Country or (3) in any other manner that will result in a violation by any Person (including any Person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. For the past five years, the Company and its Subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(cc) Anti-Bribery. Neither the Company, nor any of its Subsidiaries or affiliates, nor any director, officer, agent, employee or other person associated with or acting on behalf of the Company, or any of its Subsidiaries or affiliates (in each case, in such capacity), has (i) used any funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity, (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee, to any employee or agent of a private entity with which the Company does or seeks to do business (a “Private Sector Counterparty”) or to foreign or domestic political parties or campaigns from corporate funds, (iii) violated or is in violation of any provision of any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions or any applicable provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (the “FCPA”), the U.K Bribery Act 2010, or any other similar law of any other jurisdiction in which the Company operates its business, including, in each case, the rules and regulations thereunder, (iv) taken or is currently taking any action in furtherance of an offer, payment, gift or anything else of value, directly or indirectly, to any person while knowing that all or some portion of the money or value will be offered, given or promised to anyone to improperly influence official action, to obtain or retain business or otherwise to secure any improper advantage or (v) otherwise made any bribe, rebate, payoff, influence payment, unlawful kickback or other unlawful payment; the Company and each of its respective Subsidiaries has instituted and has maintained policies and procedures reasonably designed to promote and achieve compliance with the laws referred to in (iii) above. No action of the Company or any of its Subsidiaries in connection with the direct or indirect use of proceeds from the Securities or the consummation of any other transaction contemplated hereby or by the other

Transaction Documents or the fulfillment of the terms hereof or thereof, will result in the proceeds of the transactions contemplated hereby and by the other Transaction Documents being used to for the purpose of financing or facilitating any activity that would violate the laws and regulations referred to in (iii) above.

(dd) Insurance. The Company and each of the Subsidiaries carry, or are covered by, insurance by insurers of recognized financial responsibility in such amounts and covering such losses and risks as is materially adequate for the conduct of their respective businesses and the value of their respective properties. Neither the Company nor any such Subsidiary has been refused any insurance coverage sought or applied for and neither the Company nor any such Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers, in each case, as may be necessary to continue its business at a cost that, individually or in the aggregate, do not or would not reasonably be expected to have a Material Adverse Effect.

(ee) Employee Benefits. The Company and each Subsidiary is in compliance with all presently applicable provisions of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder (“ERISA”), except where failure to be in compliance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; no “reportable event” (as defined in ERISA) has occurred with respect to any “pension plan” (as defined in ERISA) that would reasonably be expected to have a Material Adverse Effect; the Company and each Subsidiary has not incurred and does not expect to incur liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any “pension plan” or (ii) Sections 412 or 4971 of the Internal Revenue Code of 1986, as amended, including the regulations and published interpretations thereunder (the “Code”) that, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect; and each “pension plan” for which the Company or any Subsidiary would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified except where failure to be so qualified would reasonably be expected to have a Material Adverse Effect, and, to the Company’s knowledge, nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification.

(ff) Employee Relations.

(i) Neither the Company nor any of its Subsidiaries is a party to any collective bargaining agreement or employs any member of a union. No executive officer of the Company or any of its Subsidiaries (as defined in Rule 501(f) of the 1933 Act) or other key employee of the Company or any of its Subsidiaries has notified the Company or any such Subsidiary in writing that such officer intends to leave the Company or any such Subsidiary or otherwise terminate such officer’s employment with the Company or any such Subsidiary. To the Company’s knowledge, no current executive officer or other key employee of the Company or any of its Subsidiaries is in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement, non-competition agreement, or any other contract or agreement or any restrictive covenant with a third party, and, to the Company’s knowledge, the continued employment of each such executive officer or other key employee (as the case may be) does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters, except where such violation would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(ii) The Company and its Subsidiaries are in compliance with all federal, state, local and foreign laws and regulations respecting labor, employment and employment practices and benefits, terms and conditions of employment and wages and hours, except where failure to be in compliance would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(gg) Transactions with Affiliates. To the Company's knowledge, there are no affiliations or associations between the Company, on the one hand, and any of the Company's officers, directors or 5% or greater securityholders, on the other hand, except as set forth in the Registration Statement. There are no relationships or related-party transactions involving the Company or any of the Subsidiaries or, to the knowledge of the Company, any other person required to be described in the Prospectus pursuant to Item 404 of Regulation S-K which have not been described in the Registration Statement or Prospectus as required.

(hh) Environmental Laws. The Company and its Subsidiaries (A) are in compliance with all Environmental Laws (as defined below), (B) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (C) are in compliance with all terms and conditions of any such permit, license or approval where, in each of the foregoing clauses (A), (B) and (C), the failure to so comply could be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect. The term "**Environmental Laws**" means all federal, state, local or foreign laws relating to pollution or protection of the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata), including, without limitation, laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "**Hazardous Materials**") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations issued, entered, promulgated or approved thereunder.

(ii) Listing; 1934 Act Registration. The Common Stock is quoted for trading on the Principal Market. The Company has taken no action designed to, or which would reasonably be expected to have the effect of, terminating the registration of the Common Stock under the 1934 Act or the quotation of the Common Stock on the Principal Market, nor has the Company received any notification that the SEC or the Principal Market is contemplating terminating such registration or quotation.

(jj) No Integrated Offering. The Company has not sold or issued any securities that would be integrated with the offering of the Securities contemplated by this Agreement pursuant to the 1933 Act, the Rules and Regulations or the interpretations thereof by the SEC. None of the Company, its Subsidiaries, any of their affiliates, and any Person acting on their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers

to buy any security, under circumstances that would cause this offering of the Securities to require approval of stockholders of the Company for purposes of any applicable stockholder approval provisions, including, without limitation, under the rules and regulations of any exchange or automated quotation system on which any of the securities of the Company are listed or designated. None of the Company, its Subsidiaries, their affiliates and any Person acting on their behalf will take any action or steps referred to in the preceding sentence that would cause the offering of the Securities to be integrated with other offerings for purposes of any such applicable stockholder approval provisions.

(kk) Brokerage Fees; Commissions. Except as described in the Registration Statement and the Prospectus, neither the Company nor any of its Subsidiaries is a party to any contract, agreement or understanding with any person that would give rise to a valid claim against the Company or the Buyers for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Securities. The Company shall be responsible for the payment of any placement agent's fees, financial advisory fees, or broker's commissions (other than for persons engaged by any Buyer or its investment advisor) relating to or arising out of the transactions contemplated hereby. The Company shall pay, and hold each Buyer harmless against, any liability, loss or expense (including, without limitation, attorney's fees and out-of-pocket expenses) arising in connection with such claim (other than for claims made by Persons engaged by the Buyers). The Company acknowledges that it has engaged Piper Jaffray & Co. (the "**Agent**") as placement agent in connection with the sale of the Securities. Other than the Agent, neither the Company nor any of its Subsidiaries has engaged any placement agent or other agent in connection with the sale of the Securities.

(ll) Consents. Other than as described in Section 3(t) hereof, or as have been previously obtained, filed or provided, neither the Company nor any of its Subsidiaries is required to obtain any consent or authorization of, or provide prior notice to any other Person in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents, in each case in accordance with the terms hereof or thereof. The Company and its Subsidiaries are unaware of any facts or circumstances that might prevent the Company from obtaining, effecting or providing any of the consents, authorizations or notices required in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents, in each case in accordance with the terms hereof or thereof. pursuant to the preceding sentence.

(mm) Acknowledgment Regarding Buyer's Purchase of Securities. The Company acknowledges and agrees that each Buyer is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby and that, except as disclosed in the Prospectus, no Buyer is (i) an officer or director of the Company or any of its Subsidiaries, (ii) an "affiliate" of the Company or any of its Subsidiaries (as defined in Rule 405 of the 1933 Act) or (iii) to the knowledge of the Company, a "beneficial owner" of more than 10% of the shares of Common Stock (as defined for purposes of Rule 13d-3 of the 1934 Act). The Company further acknowledges that no Buyer is acting as a financial advisor or fiduciary of the Company or any of its Subsidiaries (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby, and any advice given by a Buyer or any of its representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and

thereby is merely incidental to such Buyer's purchase of the Securities. The Company further represents to each Buyer that the Company's decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives.

(nn) Dilutive Effect. The Company understands and acknowledges that the number of Conversion Shares issuable pursuant to the terms of the Certificate of Designations and the number of Warrant Shares issuable upon exercise of the Warrants will increase in certain circumstances. The Company further acknowledges that its obligations to issue (i) Conversion Shares in accordance with this Agreement and the Certificate of Designations and (ii) Warrant Shares upon exercise of the Warrants in accordance with this Agreement and the Warrants are, in each case, subject to the terms and conditions set forth therein, absolute and unconditional regardless of the dilutive effect that such issuance may have on the ownership interests of other stockholders of the Company.

(oo) Application of Takeover Protections; Rights Agreement. The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable the Company's issuance of the Securities and any Buyer's ownership of the Securities from the provisions of any control share acquisition, interested stockholder, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Certificate of Incorporation of the Company or the laws of the state of its incorporation which is or could become applicable to any Buyer as a result of the transactions contemplated by this Agreement, including, without limitation, the Company's issuance of Securities and each Buyer's ownership of the Securities. Except as set forth in the Registration Statement and the Prospectus, the Company does not have any stockholder rights plan or similar arrangement relating to accumulations of beneficial ownership of Common Stock or a change in control of the Company. For the avoidance of doubt, the provisions of this Section 3(oo) are for the benefit of each Buyer party hereto on the date hereof and are not transferable to any other Person.

(pp) Subsidiary Rights. The Company or one of its Subsidiaries has the unrestricted right to vote, and (subject to limitations imposed by applicable law) to receive dividends and distributions on, all capital securities of its Subsidiaries as owned by the Company or such Subsidiary.

(qq) Off Balance Sheet Arrangements. There is no transaction, arrangement, or other relationship between the Company and an unconsolidated or other off balance sheet entity that is required to be disclosed by the Company in its 1934 Act filings and is not so disclosed or that otherwise would be reasonably likely to have a Material Adverse Effect.

(rr) Transfer Taxes. On the Closing Date, all stock transfer or other similar taxes (other than income or similar taxes) which are required to be paid in connection with the sale and transfer of the Securities to be sold to each Buyer hereunder will be, or will have been, fully paid or provided for by the Company, and all laws imposing such taxes will be or will have been complied with.

(ss) Acknowledgement Regarding Buyers' Trading Activity. The Company acknowledges and agrees (i) that none of the Buyers has been asked to agree, nor has any Buyer agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or

“derivative” securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) that future open market or other transactions by any Buyer, including, without limitation, short sales or “derivative” transactions, after the closing of the transactions contemplated by this Agreement or future transactions, may negatively impact the market price of the Company’s publicly-traded securities; (iii) that any Buyer, and counter parties in “derivative” transactions to which any such Buyer is a party, directly or indirectly, presently may have a “short” position in the Common Stock; and (iv) that such Buyer shall not be deemed to have any affiliation with or control over any arm’s length counter-party in any “derivative” transaction. The Company further understands and acknowledges that (a) one or more Buyers may engage in hedging and/or trading activities at various times during the periods that the Securities are outstanding, including, without limitation, during the period that the value of the Conversion Shares and the Warrant Shares deliverable with respect to Securities are being determined and (b) such hedging and/or trading activities (if any) could reduce the value of the existing stockholders’ equity interests in the Company at and after the time that the hedging and/or trading activities are being conducted. The Company acknowledges that such aforementioned hedging and/or trading activities do not constitute a breach of this Agreement, the Certificate of Designations, the Warrants or any of the documents executed in connection herewith.

(tt) U.S. Real Property Holding Corporation. Neither the Company, nor any of its Subsidiaries, is or has ever been a U.S. real property holding corporation within the meaning of Section 897 of the Code and the Company and each Subsidiary shall so certify upon any Buyer’s request.

(uu) Shell Company Status. The Company is not, and has not in the past five (5) years been, an issuer identified in Rule 144(i)(1). More than (1) year has lapsed since the Company filed current “Form 10 information” (as defined in Rule 144(i)(3)) with the SEC reflecting its status as an entity that was no longer an issuer described in Rule 144(i)(1)(i).

(vv) Bank Holding Company. Neither the Company nor any of its Subsidiaries or affiliates is subject to the Bank Holding Company Act of 1956, as amended (the “**BHCA**”) and to regulation by the Board of Governors of the Federal Reserve System (the “**Federal Reserve**”). Neither the Company nor any of its Subsidiaries or affiliates owns or controls, directly or indirectly, five percent or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(ww) SEC Documents; Financial Statements. During the two (2) years prior to the date hereof, the Company has timely filed all reports, schedules, forms, statements and other documents required to be filed by it with the SEC pursuant to the reporting requirements of the 1934 Act (all of the foregoing filed prior to the date hereof, and all exhibits included therein and financial statements, notes and schedules thereto and documents incorporated by reference therein being hereinafter referred to as the “**SEC Documents**”). The Company has delivered to the Buyers or their respective representatives true, correct and complete copies of the SEC Documents not available on the EDGAR system. As of their respective filing dates, the SEC Documents complied in all material respects with the requirements of the 1934 Act and the rules and regulations of the SEC promulgated thereunder applicable to the SEC Documents, and none

of the SEC Documents, at the time they were filed with the SEC, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. As of their respective filing dates, the financial statements of the Company included in the SEC Documents complied as to form in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto. Such financial statements have been prepared in accordance with generally accepted accounting principles, consistently applied, during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto, or (ii) in the case of unaudited interim statements, to the extent they may exclude footnotes or may be condensed or summary statements) and fairly present in all material respects the financial position of the Company as of the dates thereof and the results of its operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal year-end audit adjustments). No other information provided by or on behalf of the Company to the Buyers which is not included in the SEC Documents contains any untrue statement of a material fact or omits to state any material fact necessary in order to make the statements therein, in the light of the circumstance under which they were made, not misleading.

(xx) Placement Agent Agreement. The Company has entered into a Placement Agent Agreement, dated as of August 16, 2017, with the Agent that contains certain representations, warranties, covenants and agreements of the Company.

(yy) Lock-Up Agreements. The Company and each of the parties set forth on Exhibit C hereto has executed and delivered to the Company a lock up agreement in the form attached hereto as Exhibit D (the “**Lock-Up Agreement**”).

(zz) Indebtedness and Other Contracts. Except as set forth on Schedule 3(zz), neither the Company nor any of its Subsidiaries, (i) has any outstanding Indebtedness (as defined below), (ii) is a party to any contract, agreement or instrument relating to Indebtedness, the violation of which, or default under which, by the other party(ies) to such contract, agreement or instrument would reasonably be expected to result in a Material Adverse Effect, (iii) is in violation of any term of, or in default under, any contract, agreement or instrument relating to any Indebtedness, except where such violations and defaults would not result, individually or in the aggregate, in a Material Adverse Effect, or (iv) is a party to any contract, agreement or instrument relating to any Indebtedness, the performance of which, in the judgment of the Company’s officers, has or is expected to have a Material Adverse Effect. Schedule 3(zz) provides a detailed description of the material terms of any such outstanding Indebtedness, including, without limitation, descriptions of any defaults, forbearances, accounts receivable and accounts payable thereunder. For purposes of this Agreement: (x) “**Indebtedness**” of any Person means, without duplication (A) all indebtedness for borrowed money, (B) all obligations issued, undertaken or assumed as the deferred purchase price of property or services (including, without limitation, “capital leases” in accordance with GAAP consistently applied, during the periods involved) (other than trade payables entered into in the ordinary course of business consistent with past practice), (C) all reimbursement or payment obligations with respect to letters of credit, surety bonds and other similar instruments, (D) all obligations evidenced by notes, bonds, debentures or similar instruments, including obligations so evidenced incurred in connection with the acquisition of property, assets or businesses, (E) all indebtedness created or arising

under any conditional sale or other title retention agreement, or incurred as financing, in either case with respect to any property or assets acquired with the proceeds of such indebtedness (even though the rights and remedies of the seller or bank under such agreement in the event of default are limited to repossession or sale of such property), (F) all monetary obligations under any leasing or similar arrangement which, in connection with GAAP, consistently applied for the periods covered thereby, is classified as a capital lease, (G) all indebtedness referred to in clauses (A) through (F) above secured by (or for which the holder of such Indebtedness has an existing right, contingent or otherwise, to be secured by) any mortgage, claim, lien, tax, right of first refusal, pledge, charge, security interest or other encumbrance upon or in any property or assets (including accounts and contract rights) owned by any Person, even though the Person which owns such assets or property has not assumed or become liable for the payment of such indebtedness, and (H) all Contingent Obligations in respect of indebtedness or obligations of others of the kinds referred to in clauses (A) through (G) above; and (y) “**Contingent Obligation**” means, as to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to any indebtedness, capital lease or other obligation of another Person if the primary purpose or intent of the Person incurring such liability, or the primary effect thereof, is to provide assurance to the obligee of such liability that such liability will be paid or discharged, or that any agreements relating thereto will be complied with, or that the holders of such liability will be protected (in whole or in part) against loss with respect thereto.

(aaa) Stock Option Plans. Each stock option granted by the Company was granted (i) in accordance with the terms of the applicable Company stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP consistently applied, during the periods involved and applicable law. No stock option granted under the Company’s stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

(bbb) No Disagreements with Accountants and Lawyers. There are no material disagreements of any kind presently existing, or reasonably anticipated by the Company to arise, between the Company and the accountants and lawyers formerly or presently employed by the Company and the Company is current with respect to any fees owed to its accountants and lawyers which could affect the Company’s ability to perform any of its obligations under any of the Transaction Documents.

(ccc) The Company acknowledges and agrees that no Buyer nor any other Person makes or has made any representations and warranties about or relating to the Buyers or with respect to the transactions contemplated by this Agreement other than those representations and warranties of the Buyers specifically set forth in Section 2, and the Company has not relied on, and expressly disclaims any reliance on, any representation, warranty or other information about or relating to the Buyers or with respect to the transactions contemplated by this Agreement except for the representations and warranties of the Buyers set forth in Section 2.

4. COVENANTS.

(a) Best Efforts. Each party shall use its best efforts timely to satisfy each of the covenants and the conditions to be satisfied by it as provided in Sections 6 and 7 of this Agreement.

(b) Maintenance of Registration Statement. For so long as any of the Preferred Shares or Warrants remain outstanding, the Company shall use its reasonable best efforts to maintain the effectiveness of the Registration Statement for the issuance thereunder of the Registrable Securities (as defined below); provided that, if at any time while the Preferred Shares or the Warrants are outstanding, the Company shall be ineligible to utilize Form S-3 (or any successor form) for the purpose of issuance of the Registrable Securities, the Company shall use its reasonable best efforts to promptly amend the Registration Statement on such other form as may be necessary to maintain the effectiveness of the Registration Statement for this purpose. For the purpose of this Agreement, "**Registrable Securities**" means (i) the Conversion Shares issued or issuable pursuant to the terms of the Certificate of Designations, (ii) the Warrant Shares issued or issuable upon exercise of the Warrants and (iii) any shares of capital stock of the Company issued or issuable with respect to the Preferred Shares, the Conversion Shares, the Warrants and/or the Warrant Shares as a result of any stock split, stock dividend, recapitalization, exchange or similar event or otherwise, without regard to any limitations on issuance, conversion or exercise thereof.

(c) Prospectus Supplement and Blue Sky. In the manner required by law, the Company shall have delivered to the Buyers, and as soon as practicable after the Closing, the Company shall file, the Prospectus Supplement with respect to the Securities as required under and in conformity with the 1933 Act, including Rule 424(b) thereunder. If required, the Company, on or before the Closing Date, shall take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for or to qualify the Securities for sale to the Buyers at the Closing pursuant to this Agreement under applicable securities or "Blue Sky" laws of the states of the United States (or to obtain an exemption from such qualification), and shall provide evidence of any such action so taken to the Buyers on or prior to the Closing Date. The Company shall make all filings and reports relating to the offer and sale of the Securities required under applicable securities or "Blue Sky" laws of the states of the United States following the Closing Date.

(d) Use of Proceeds. The Company will use the proceeds from the sale of the Securities in the manner described in the Prospectus.

(e) Listing. The Company shall promptly secure the listing of all of the Conversion Shares and Warrant Shares upon each securities exchange and automated quotation system, if any, upon which the Common Stock is then listed, including the Principal Market (subject to official notice of issuance) and shall maintain such listing of all Conversion Shares and Warrant Shares from time to time issuable under the terms of the Transaction Documents. The Company shall maintain the authorization for quotation of the Common Stock on the Principal Market or any other Eligible Market. Neither the Company nor any of its Subsidiaries shall take any action which would be reasonably expected to result in the delisting or suspension of the Common Stock on the Principal Market. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 4(e).

(f) Fees. The Company shall pay an expense allowance to the Lead Investor or its designee(s) for all costs and expenses of the Lead Investor incurred in connection with the transactions contemplated by the Transaction Documents (including all legal fees and disbursements in connection therewith, documentation and implementation of the transactions contemplated by the Transaction Documents and due diligence in connection therewith) through the Closing that have not been reimbursed by the Company on or prior to the Closing, which amount, at the option of such Buyer, may be withheld by such Buyer from its Purchase Price at the Closing. Notwithstanding the foregoing, in no event will the amount of costs, fees and expenses of the Lead Investor incurred through the Closing to be reimbursed by the Company pursuant to this Section 4(f) exceed \$50,000 without the prior approval from the Company (in addition to any other expense amounts paid to the Lead Investor, any other Buyer or any of their respective counsel prior to the date of this Agreement). The Company shall be responsible for the payment of any placement agent's fees, financial advisory fees, or broker's commissions (other than for Persons engaged by any Buyer) relating to or arising out of the transactions contemplated hereby, including, without limitation, any fees or commission payable to the Agent. The Company shall pay, and hold each Buyer harmless against, any liability, loss or expense (including, without limitation, reasonable attorney's fees and out-of-pocket expenses) arising in connection with any claim relating to any such payment of any placement agent's fees, financial advisory fees, or broker's commissions. Except as otherwise set forth in the Transaction Documents, each party to this Agreement shall bear its own expenses in connection with the sale of the Securities to the Buyers.

(g) Pledge of Securities. The Company acknowledges and agrees that the Securities may be pledged by any holder of Securities (an "Investor") in connection with a bona fide margin agreement or other loan or financing arrangement that is secured by the Securities. Any such pledge of Securities shall not be deemed to be a transfer, sale or assignment of the Securities hereunder, and no Investor effecting a pledge of Securities shall be required to provide the Company with any notice thereof or otherwise make any delivery to the Company pursuant to this Agreement or any other Transaction Document. The Company hereby agrees to execute and deliver such documentation as a pledgee of the Securities may reasonably request in connection with a pledge of the Securities to such pledgee by an Investor.

(h) Reporting Status. Until the date on which the Investors shall have sold all of the Conversion Shares and Warrant Shares and none of the Preferred Shares or Warrants are outstanding (the "**Reporting Period**"), the Company shall timely file all reports required to be filed with the SEC pursuant to the 1934 Act, and the Company shall not terminate its status as an issuer required to file reports under the 1934 Act even if the 1934 Act or the rules and regulations thereunder would no longer require or otherwise permit such termination.

(i) Financial Information. The Company agrees to send the following to each Investor during the Reporting Period unless the following are filed with the SEC through EDGAR and are available to the public through the EDGAR system or a broadly disseminated press release, (i) within one (1) Business Day after the filing thereof with the SEC, a copy of its Annual Reports on Form 10-K, any Quarterly Reports on Form 10-Q, any Current Reports on

Form 8-K (or any analogous reports under the 1934 Act) and any registration statements (other than on Form S-8) or amendments filed pursuant to the 1933 Act, (ii) on the same day as the release thereof, facsimile or e-mailed copies of all press releases issued by the Company or any of its Subsidiaries and (iii) copies of any notices and other information made available or given to the stockholders of the Company generally, contemporaneously with the making available or giving thereof to the stockholders. As used herein, “**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

(j) Disclosure of Transactions and Other Material Information. On or before 8:30 a.m., New York City time, on the first Business Day following the date of this Agreement, the Company shall issue a press release and file a Current Report on Form 8-K describing the terms of the transactions contemplated by the Transaction Documents in the form required by the 1934 Act and attaching the material Transaction Documents (including, without limitation, this Agreement (and all schedules and exhibits to this Agreement), the Certificate of Designations, the form of Warrant, the form of Lock-Up Agreement and the form of Voting Agreement) as exhibits to such filing (including all attachments, the “**8-K Filing**”). As of immediately following the filing of the 8-K Filing with the SEC, no Buyer shall be in possession of any material, nonpublic information received from the Company, any of its Subsidiaries or any of their respective officers, directors, employees, affiliates or agents, that is not disclosed in the 8-K Filing or in prior filings with the SEC. In addition, effective upon the filing of the 8-K Filing, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, whether written or oral, between the Company, any of its Subsidiaries or any of their respective officers, directors, employees, affiliates or agents, on the one hand, and the Lead Investor or any of its affiliates, on the other hand, shall terminate and be of no further force or effect. Except as required to comply with the terms and conditions of the Transaction Documents, the Company shall not, and shall cause each of its Subsidiaries and its and each of their respective officers, directors, employees, affiliates and agents, not to, provide the Lead Investor with any material, nonpublic information regarding the Company or any of its Subsidiaries from and after the date hereof without the express written consent of the Lead Investor. If the Lead Investor has, or reasonably believes it has, received any such material, nonpublic information regarding the Company or any of its Subsidiaries provided in breach of the preceding sentence, it shall provide the Company with written notice thereof in which case the Company shall, within two (2) Trading Days (as defined in the Warrants) of receipt of such notice, make public disclosure of any such material, nonpublic information provided in breach of the preceding sentence or confirm in writing that such information does not constitute material, nonpublic information regarding the Company or any of its Subsidiaries. To the extent that the Company, its Subsidiaries or any of its or their respective officers, directors, employees, affiliates or agents delivers any material, non-public information to the Lead Investor without the Lead Investor’s prior written consent, the Company hereby covenants and agrees that the Lead Investor shall not have any duty of confidentiality to the Company, any of its Subsidiaries or any of their respective officers, directors, employees, affiliates or agents with respect to, or a duty to the Company, any of its Subsidiaries or any of their respective officers, directors, employees, affiliates or agents not to trade on the basis of, such material, non-public information. Subject to the foregoing, neither the Company, its Subsidiaries nor any Buyer shall issue any press releases or any other public statements with respect to the transactions contemplated hereby; provided, however, that the Company shall be entitled, without the prior approval of any Buyer, to make

any press release or other public disclosure with respect to such transactions (i) in substantial conformity with the 8-K Filing and contemporaneously therewith and (ii) as is required by applicable law, regulation or any Eligible Market on which the Company's securities are then listed or quoted (provided that in the case of clause (i) the Lead Investor shall be consulted by the Company in connection with any such press release or other public disclosure prior to its release). Without the prior written consent of any applicable Buyer, neither the Company nor any of its Subsidiaries or affiliates shall disclose the name of such Buyer in any filing, announcement, release or otherwise other than in connection with the Registration Statement unless such disclosure is required by law, regulation or any Eligible Market on which the Company's securities are then listed or quoted.

(k) Additional Preferred Shares; Variable Securities. For so long as any Preferred Shares remain outstanding, the Company will not issue any Preferred Shares or any shares of the Company's preferred stock that are senior to or on a parity with the Preferred Shares with respect to distributions on liquidation other than to the Buyers as contemplated hereby. For so long as any Preferred Shares remain outstanding, the Company shall not, in any manner, issue or sell any rights, warrants or options to subscribe for or purchase Common Stock or directly or indirectly convertible into or exchangeable or exercisable for Common Stock at a price which varies or may vary with the market price of the Common Stock, including by way of one or more reset(s) to any fixed price, unless the conversion, exchange or exercise price of any such security cannot be less than the then applicable Conversion Price (as defined in the Certificate of Designations) with respect to the Common Stock into which any Preferred Shares are convertible or redeemable.

(l) Corporate Existence. For so long as any Preferred Shares or Warrants remain outstanding, the Company shall maintain its corporate existence and shall not be party to any Fundamental Transaction (as defined in the Certificate of Designations and the Warrants) unless the Company is in compliance with the applicable provisions governing Fundamental Transactions set forth in the Certificate of Designations (for so long as any Preferred Shares remain outstanding) and the Warrants (for so long as any Warrants remain outstanding).

(m) Reservation of Shares. So long as any Buyer owns any Securities, the Company shall take all action necessary to at all times have authorized, and reserved for issuance the Required Reserve Amount. If at any time the number of shares of Common Stock authorized and reserved for issuance is not sufficient to meet the Required Reserve Amount, the Company will promptly take all corporate action necessary to authorize and reserve a sufficient number of shares to meet the Required Reserve Amount, including, without limitation, calling a special meeting of stockholders to authorize additional shares, obtaining, as may be required, stockholder approval of an increase in such authorized number of shares, and voting the management shares of the Company in favor of an increase in the authorized shares of the Company to ensure that the number of authorized shares is sufficient to meet the Required Reserve Amount. Upon any increase in the number of authorized or unreserved shares of Common Stock of the Company following the date hereof, the Company shall use such increased number of authorized shares to satisfy its obligations to keep the Required Reserve Amount of shares reserved for the Securities before reserving or using shares for any other purpose. The initial number of shares of Common Stock reserved for conversion or redemption of the Preferred Shares and for exercise of the Warrants and each increase in the number of

shares so reserved shall be allocated pro rata among the Buyers, based on the total number of shares of Common Stock issuable pursuant to the Certificate of Designations or upon exercise of the Warrants (without regard to any limitations in exercise, including, without limitation, the Maximum Percentage) issued to each Buyer on the Closing Date (the “**Authorized Share Allocation**”). In the event that a Buyer shall sell or otherwise transfer any of its Preferred Shares or Warrants, each transferee shall be allocated a pro rata portion of such holder’s Authorized Share Allocation. Any shares of Common Stock reserved and allocated to any Person which ceases to hold any Preferred Shares or Warrants shall be allocated to the holders of the remaining Preferred Shares and Warrants, pro rata based on the shares of Common Stock issuable pursuant to the Certificate of Designations or upon exercise of the Warrants then held by such holders (without regard to any limitations on the conversion or redemption of the Preferred Shares or on the exercise of the Warrants).

(n) Operations. For so long as any Preferred Shares remain outstanding, unless otherwise agreed to by the Required Holders, the Company and each of its Subsidiaries shall:

(i) maintain and preserve its existence, rights and privileges, and become or remain duly qualified and in good standing in each jurisdiction in which the character of its properties owned or leased by it or in which the transaction of its business makes such qualification necessary, except, in each case, were failure to maintain and preserve such existence, rights and privileges, remain qualified or to be in good standing would not reasonably be expected to have a Material Adverse Effect;

(ii) maintain and preserve all of its properties which are necessary in the proper conduct of its business in good working order and condition, ordinary wear and tear excepted, and comply at all times with the provisions of all leases to which it is a party as lessee or under which it occupies property, except, in each case, were failure to so maintain and preserve or to comply would not reasonably be expected to have a Material Adverse Effect;

(iii) maintain insurance with responsible and reputable insurance companies or associations (including, without limitation, comprehensive general liability, hazard, rent and business interruption insurance) with respect to its properties (including all real property leased or owned by the Company) and business, in such amounts and covering such risks as is required by any governmental authority having jurisdiction with respect thereto or as is carried generally in accordance with the business practices of companies similarly situated to the Company, except, in each case, where failure to so maintain would not reasonably be expected to have a Material Adverse Effect;

(iv) maintain and preserve all of its Intellectual Property Rights which are necessary for the proper conduct of its business, except where failure to so maintain and preserve would not reasonably be expected to have a Material Adverse Effect;

(v) not conduct its business in violation of any law, ordinance or regulation of any governmental entity, including, without limitation, FCPA, OFAC regulations and Anti-Money Laundering Laws, except where such violations would not result, either individually or in the aggregate, in a Material Adverse Effect and shall continue to maintain policies and procedures reasonably designed to achieve compliance with the laws referred to in clause (iii) of Section 3(cc); and

(vi) (A) not be an “investment company,” and affiliate of an “investment company,” a company controlled by an “investment company” or an “affiliated person” of, or “promoter” or “principal underwriter” for, an “investment company”, as such terms are defined in the Investment Company Act of 1940, as amended; (B) not become a U.S. real property holding corporation within the meaning of Section 897 of the Code (and the Company and each Subsidiary shall so certify upon any Buyer’s request); (C) not become subject to the BHCA or regulation by the Federal Reserve; (D) not own or control, directly or indirectly, five percent or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve; and (E) not exercise a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(o) Lock-Up. The Company shall not amend or waive any provision of the Lock-Up Agreements except to extend the term of the lock-up period contained therein and shall enforce the provisions of the Lock-Up Agreements in accordance with their terms. If any party to a Lock-Up Agreement breaches any provision of a Lock-Up Agreement, the Company shall promptly use reasonable best efforts to seek specific performance of the terms of such Lock-Up Agreement.

(p) Additional Issuances of Securities.

(i) For purposes of this Section 4(p), the following definitions shall apply.

(1) “**Convertible Securities**” means any stock or securities (other than Options) convertible into or exercisable or exchangeable for shares of Common Stock.

(2) “**Options**” means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(3) “**Common Stock Equivalents**” means, collectively, Options and Convertible Securities.

(ii) From the date hereof until the date (the “**Trigger Date**”) that is the earlier of (1) 60 days after the date on which the Stockholder Approval (as defined in Section 4(q)) is obtained and (2) May 1, 2018, the Company will not (A) directly or indirectly, file any registration statement with the SEC other than the Registration Statement and shall not file any Prospectus Supplement with respect to any Subsequent Placement (as defined below), (B) directly or indirectly, offer, sell, grant any option to purchase, or otherwise dispose of (or announce any offer, sale, grant or any option to purchase or other disposition of) any of its or its Subsidiaries’ equity or equity equivalent securities, including without limitation any debt, preferred stock or other instrument or security that is, at any time during its life and under any circumstances, convertible into or exchangeable or exercisable for shares of Common Stock or Common Stock Equivalents (any such offer, sale, grant, disposition or announcement being referred to as a “**Subsequent Placement**”), or (C) be party to any solicitations, negotiations or discussions with regard to the foregoing.

(iii) From the Trigger Date until the second (2nd) anniversary of the Closing Date, the Company will not, directly or indirectly, effect any Subsequent Placement unless the Company shall have first complied with this Section 4(p)(iii).

(1) The Company shall deliver to each Buyer an irrevocable written notice (the “Offer Notice”) of any proposed or intended issuance or sale or exchange (the “Offer”) of the securities being offered (the “Offered Securities”) in a Subsequent Placement, which Offer Notice shall (w) identify and describe the Offered Securities, (x) describe the anticipated price and other material terms upon which they are to be issued, sold or exchanged, and the number or amount of the Offered Securities to be issued, sold or exchanged, (y) identify the persons or entities (if known) to which or with which the Offered Securities are to be offered, issued, sold or exchanged and (z) offer to issue and sell to or exchange with such Buyers at least fifty percent (50%) of the Offered Securities, allocated among such Buyers (a) based on such Buyer’s pro rata apportionment of the number of Preferred Shares purchased hereunder (the “Basic Amount”) and (b) with respect to each Buyer that elects to purchase its Basic Amount, any additional portion of the Offered Securities attributable to the Basic Amounts of other Buyers as such Buyer shall indicate it will purchase or acquire should the other Buyers subscribe for less than their Basic Amounts (the “Undersubscription Amount”), which process shall be repeated until the Buyers shall have an opportunity to subscribe for any remaining Undersubscription Amount; provided that (i) the Company shall promptly notify each Buyer of any changes to the anticipated price and other material terms of the Offered Securities after the Offer Notice is sent and (ii) the Company shall provide each Buyer reasonable notice (which shall not be less than four (4) hours) of the final price (or formula therefor) and other material terms of the Offered Securities before the Buyers are required to provide the Company any notice of their election to accept such Offer pursuant to Section 4(p)(iii) (2) below.

(2) To accept an Offer, in whole or in part, such Buyer must deliver a written notice to the Company prior to the end of the fifth (5th) Business Day after such Buyer’s receipt of the Offer Notice (the “Offer Period”), setting forth the portion of such Buyer’s Basic Amount that such Buyer elects to purchase and, if such Buyer shall elect to purchase all of its Basic Amount, the Undersubscription Amount, if any, that such Buyer elects to purchase (in either case, the “Notice of Acceptance”). If the Basic Amounts subscribed for by all Buyers are less than the total of all of the Basic Amounts, then each Buyer who has set forth an Undersubscription Amount in its Notice of Acceptance shall be entitled to purchase, in addition to the Basic Amounts subscribed for, the Undersubscription Amount it has subscribed for; provided, however, that if the Undersubscription Amounts subscribed for exceed the difference between the total of all the Basic Amounts and the Basic Amounts subscribed for (the “Available Undersubscription Amount”), each Buyer who has subscribed for any Undersubscription Amount shall be entitled to purchase only that portion of the Available Undersubscription Amount as the Basic Amount of such Buyer bears to the total Basic

Amounts of all Buyers that have subscribed for Undersubscription Amounts, subject to rounding by the Company to the extent its deems reasonably necessary. Notwithstanding anything to the contrary contained herein, if the Company desires to modify or amend the terms and conditions of the Offer, in any material respect, prior to the expiration of the Offer Period, the Company may deliver to the Buyers a new Offer Notice and the Offer Period shall expire on the second (2nd) Business Day after such Buyer's receipt of such new Offer Notice.

(3) The Company shall have fifteen (15) Business Days from the expiration of the Offer Period above to offer, issue, sell or exchange all or any part of such Offered Securities as to which a Notice of Acceptance has not been given by the Buyers (the "**Refused Securities**") pursuant to a definitive agreement (the "**Subsequent Placement Agreement**"), but only to the offerees described in the Offer Notice (if so described therein) and only upon terms and conditions (including, without limitation, unit prices and interest rates) that are not more favorable to the acquiring Person or Persons or less favorable to the Company than those set forth in the Offer Notice and to publicly announce (a) the execution of such Subsequent Placement Agreement, if any, and (b) if a Subsequent Placement Agreement is so executed, either (x) the consummation of the transactions contemplated by such Subsequent Placement Agreement or (y) the termination of such Subsequent Placement Agreement, which shall be filed with the SEC on a Current Report on Form 8-K with such Subsequent Placement Agreement and any documents contemplated therein filed as exhibits thereto.

(4) In the event the Company shall propose to sell less than all the Refused Securities (any such sale to be in the manner and on the terms specified in Section 4(p)(iii)(3) above), then each Buyer may, at its sole option and in its sole discretion, reduce the number or amount of the Offered Securities specified in its Notice of Acceptance to an amount that shall be not less than the number or amount of the Offered Securities that such Buyer elected to purchase pursuant to Section 4(p)(iii)(2) above multiplied by a fraction, (i) the numerator of which shall be the number or amount of Offered Securities the Company actually proposes to issue, sell or exchange (including Offered Securities to be issued or sold to Buyers pursuant to Section 4(p)(iii)(3) above prior to such reduction) and (ii) the denominator of which shall be the original amount of the Offered Securities. In the event that any Buyer so elects to reduce the number or amount of Offered Securities specified in its Notice of Acceptance, the Company may not issue, sell or exchange more than the reduced number or amount of the Offered Securities unless and until such securities have again been offered to the Buyers in accordance with Section 4(p)(iii)(1) above.

(5) Upon the closing of the issuance, sale or exchange of all or less than all of the Refused Securities, the Buyers shall acquire from the Company, and the Company shall issue to the Buyers, the number or amount of Offered Securities specified in the Notices of Acceptance, as reduced pursuant to Section 4(p)(iii)(4) above if the Buyers have so elected, upon the terms and conditions specified in the Offer. Notwithstanding anything to the contrary contained in this Agreement, if the Company does not consummate the closing of the issuance, sale or exchange of all or less than all of the Refused Securities, within fifteen (15) Business Days of the expiration of the Offer

Period, the Company shall issue to the Buyers, the number or amount of Offered Securities specified in the Notice of Acceptance, as reduced pursuant to Section 4(p)(iii)(4) above if the Buyers have so elected, upon the terms and conditions specified in the Offer.

The purchase by the Buyers of any Offered Securities is subject in all cases to the preparation, execution and delivery by the Company and the Buyers of a purchase agreement relating to such Offered Securities reasonably satisfactory in form and substance to the Buyers and their respective counsel; provided that, for the avoidance of doubt, this paragraph shall not create any obligation on the Company to amend or modify, or seek to amend or modify, any of the terms or provisions of the Subsequent Placement Agreement, or otherwise prohibit the Company from consummating the respective Subsequent Placement of Refused Securities in accordance with the applicable Subsequent Placement Agreement.

(6) Any Offered Securities not acquired by the Buyers or other persons in accordance with Section 4(p)(iii)(3) above may not be issued, sold or exchanged until they are again offered to the Buyers under the procedures specified in this Section 4(p)(iii).

(7) The Company and the Buyers agree that if any Buyer elects to participate in an Offer, (x) neither the purchase agreement with respect to such Offer nor any other transaction documents related thereto, in each case, that are binding on such Buyers, shall include any term or provisions whereby any Buyer shall be required to agree to any restrictions in trading as to any securities of the Company owned by such Buyer prior to such Subsequent Placement and (y) the Buyers shall be entitled to the same registration rights provided to other investors in such Subsequent Placement.

(8) Notwithstanding anything to the contrary in this Section 4(p) and unless otherwise agreed to by the Buyers, the Company shall either confirm in writing to the Buyers that the transaction with respect to the Subsequent Placement has been abandoned or shall publicly disclose its intention to issue the Offered Securities, in either case in such a manner such that the Buyers will not be in possession of material non-public information, by the fifteenth (15th) Business Day following delivery of the Offer Notice. If by the fifteenth (15th) Business Day following delivery of the Offer Notice no public disclosure regarding a transaction with respect to the Offered Securities has been made, and no notice regarding the abandonment of such transaction has been received by the Buyers, such transaction shall be deemed to have been abandoned and the Buyers shall not be deemed to be in possession of any material, non-public information with respect to the Company. Should the Company decide to pursue such transaction with respect to the Offered Securities, the Company shall provide each Buyer with another Offer Notice and each Buyer will again have the right of participation set forth in this Section 4(p)(iii). The Company shall not be permitted to deliver more than two such Offer Notices to the Buyers in any 90-day period (other than the Offer Notices contemplated by the last sentence of Section 4(p)(iii)(2) of this Agreement) Notwithstanding anything to the contrary herein, in no event shall delivery of any notice in accordance with the requirements of this Section 4(p) constitute or be deemed to constitute a breach of the Company's obligation not to provide material non-public information regarding the Company to any Buyer or any other Person; provided the Company then complies with the applicable requirement to publicly disclose such material, nonpublic information pursuant to this Section 4(p)(iii).

(iv) This Section 4(p) shall not apply in connection with the issuance of any Excluded Securities (as defined in the Warrants); provided that for purposes of this Section 4(p) such definition of Excluded Securities shall be read to delete the phrase “600,000 shares of Common Stock (as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the Subscription Date)” and replace it with “2% of the aggregate number of shares of Common Stock outstanding on the date of such issuance”.

(q) Stockholder Approval. The Company shall provide each stockholder entitled to vote at the next special or annual meeting of stockholders of the Company (the “**Stockholder Meeting**”), which shall be promptly called and held not later than October 31, 2017 (the “**Stockholder Meeting Deadline**”), a proxy statement, substantially in the form which has been previously reviewed by the Lead Investor and Schulte Roth & Zabel LLP, at the expense of the Company, soliciting each such stockholder’s affirmative vote at the Stockholder Meeting for approval of resolutions providing for the Company’s issuance of all of the Securities as described in the Transaction Documents in accordance with applicable law and the rules and regulations of the Principal Market without giving effect to the Exchange Cap provisions set forth in the Certificate of Designations and/or the Warrants (such affirmative approval being referred to herein as the “**Stockholder Approval**”), and the Company shall use its reasonable best efforts to solicit its stockholders’ approval of such resolutions and to cause the Board of Directors of the Company to recommend to the stockholders that they approve such resolutions. The Company shall be obligated to use its reasonable best efforts to obtain the Stockholder Approval by the Stockholder Meeting Deadline. If, despite the Company’s reasonable best efforts the Stockholder Approval is not obtained on or prior to the Stockholder Meeting Deadline, the Company shall cause an additional Stockholder Meeting to be held every three (3) months thereafter until such Stockholder Approval is obtained; provided that, in no event, shall the Company be obligated to call more than three (3) Stockholder Meetings in its efforts to obtain the Stockholder Approval.

(r) Voting Agreement. The Company shall use its best efforts to effectuate the transactions contemplated by the Voting Agreement, substantially in the form attached hereto as Exhibit E (the “**Voting Agreement**”), executed by the Company and each of Novartis Bioventures Ltd., UFF Innovation 14 FCPI, UFF Innovation 15 FCPI, UFF Innovation 16 FCPI, UFF Innovation 17 FCPI, Truffle InnoCroissance 2015 FCPI, UFF Innovation 5 (UFF5) FCPI, Europe Innovation 2004 (E104) FCPI, Europe Innovation 2006 (E106) FCPI, Truffle Cap II (TCII) FCPR, Truffle Fortune 4 FCPI, Truffle Fortune 5 FCPI, Truffle Fortune 6 FCPI, Redmont VAXN Capital Holdings, LLC, Redmont Venture Partners, Inc., Paradigm Venture Partners, L.P., HealthCap V LP and OFCO Club V (collectively, the “**Principal Stockholders**”). The Company shall not amend or waive any provision of the Voting Agreement and shall enforce the provisions of the Voting Agreement in accordance with its terms. If any of the Principal Stockholders breach any provisions of the Voting Agreement, the Company shall promptly use its best efforts to seek specific performance of the terms of the Voting Agreement in accordance with Section [4.02] thereof. In addition, if the Company receives any notice from any of the Principal Stockholders pursuant to the Voting Agreement, the Company shall promptly, but in no event later than two (2) Business Days, deliver a copy of such notice to each Buyer.

(s) Closing Documents. On or prior to fourteen (14) calendar days after the Closing Date, the Company agrees to deliver, or cause to be delivered, to each Buyer and Schulte

Roth & Zabel LLP executed copies of the Transaction Documents, Securities and other documents required to be delivered to any party pursuant to Section 7 hereof. Each Buyer acknowledges that delivery of such copies in PDF form via email shall satisfy this requirement.

(t) Good Standing Certificates. On or prior to thirty (30) calendar days after the Closing Date, the Company agrees to deliver, or cause to be delivered, to each Buyer a certificate evidencing the formation and good standing of the Company's foreign Subsidiaries in such entity's jurisdiction of formation issued by the Secretary of State (or comparable office) of such jurisdiction.

5. REGISTER; TRANSFER AGENT INSTRUCTIONS.

(a) Register. The Company shall maintain at its principal executive offices (or such other office or agency of the Company as it may designate by notice to each holder of Securities), a register for the Preferred Shares and the Warrants in which the Company shall record the name and address of the Person in whose name the Preferred Shares and the Warrants have been issued (including the name and address of each transferee), the number of Preferred Shares held by such Person, the number of Conversion Shares issued and issuable pursuant to the terms of the Certificate of Designations and the number of Warrant Shares issuable upon exercise of the Warrants held by such Person. The Company shall keep the register open and available at all times during business hours for inspection of any Buyer or its legal representatives.

(b) Transfer Agent Instructions. The Company shall issue irrevocable instructions to the Company's transfer agent to issue certificates or credit shares to the applicable balance accounts at DTC, registered in the name of each Buyer or its respective nominee(s), for the Conversion Shares and the Warrant Shares in such amounts as specified from time to time by each Buyer to the Company pursuant to the terms of the Certificate of Designations or exercise of the Warrants in the form of Exhibit F attached hereto (the "**Irrevocable Transfer Agent Instructions**"). The Company represents and warrants that no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 5 will be given by the Company to the Transfer Agent, and any subsequent transfer agent, with respect to the Securities, and that the Securities shall otherwise be freely transferable on the books and records of the Company as and to the extent provided in this Agreement and the other Transaction Documents. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Buyers. Accordingly, the Company acknowledges that the remedy at law for a breach of its obligations under this Section 5 will be inadequate and agrees, in the event of a breach or threatened breach by the Company of the provisions of this Section 5, that the Buyers shall be entitled, in addition to all other available remedies, to an order and/or injunction restraining any breach and requiring immediate issuance and transfer, without the necessity of showing economic loss and without any bond or other security being required.

(c) FAST Compliance While any Preferred Shares or Warrants are outstanding, the Company shall maintain a transfer agent that participates in the DTC Fast Automated Securities Transfer Program.

6. CONDITIONS TO THE COMPANY'S OBLIGATION TO SELL.

The obligation of the Company hereunder to issue and sell the Preferred Shares and the related Warrants to each Buyer at the Closing is subject to the satisfaction, at or before the Closing Date, of each of the following conditions, provided that these conditions are for the Company's sole benefit and may be waived by the Company at any time in its sole discretion by providing each Buyer with prior written notice thereof:

(i) Such Buyer shall have executed each of the Transaction Documents to which it is a party and delivered the same to the Company.

(ii) Such Buyer and each other Buyer shall have delivered to the Company the Purchase Price (less, in the case of the Lead Investor, the amounts withheld pursuant to Section 4(f)) for the Preferred Shares and the related Warrants being purchased by such Buyer at the Closing by wire transfer of immediately available funds pursuant to the wire instructions provided by the Company.

(iii) The representations and warranties of such Buyer shall be true and correct in all respects as of the date when made and as of the Closing Date as though made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such specified date), and such Buyer shall have performed, satisfied and complied in all material respects with the covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by such Buyer at or prior to the Closing Date.

(iv) No litigation, statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by or in any court or governmental authority of competent jurisdiction or any self-regulatory organization having authority over the matters contemplated hereby which prohibits the consummation of any of the transactions contemplated by this Agreement.

7. CONDITIONS TO EACH BUYER'S OBLIGATION TO PURCHASE.

The obligation of each Buyer hereunder to purchase the Preferred Shares and the related Warrants at the Closing is subject to the satisfaction, at or before the Closing Date, of each of the following conditions, provided that these conditions are for each Buyer's sole benefit and may be waived by such Buyer at any time in its sole discretion by providing the Company with prior written notice thereof:

(i) The Company shall have duly executed and delivered to such Buyer (i) each of the Transaction Documents, (ii) the Preferred Shares (allocated in such amounts as such Buyer shall request) being purchased by such Buyer at the Closing pursuant to this Agreement and (iii) the Warrants (allocated in such amounts as such Buyer shall request) being purchased by such Buyer at the Closing pursuant to this Agreement.

(ii) Such Buyer shall have received the opinion of Proskauer Rose LLP, the Company's counsel, dated as of the Closing Date, in substantially the form of Exhibit G attached hereto.

(iii) The Company shall have delivered to such Buyer a copy of the Irrevocable Transfer Agent Instructions, in the form of Exhibit F attached hereto, which instructions shall have been delivered to and acknowledged in writing by the Company's transfer agent.

(iv) The Company shall have delivered to such Buyer a certificate evidencing the formation and good standing of the Company and each of its U.S. Subsidiaries in such entity's jurisdiction of formation issued by the Secretary of State (or comparable office) of such jurisdiction, as of a date within ten (10) days of the Closing Date.

(v) The Company shall have delivered to such Buyer a certificate evidencing the Company's qualification as a foreign corporation and good standing issued by the Secretary of State (or comparable office) of each material jurisdiction in which the Company conducts business and is required to so qualify, as of a date within ten (10) days of the Closing Date.

(vi) Reserved.

(vii) The Company shall have delivered to such Buyer a certificate, executed by the Secretary of the Company and dated as of the Closing Date, as to (i) the resolutions consistent with Section 3(d) as adopted by the Company's Board of Directors in a form reasonably acceptable to such Buyer, (ii) the Company's Certificate of Incorporation (including a certified copy of the Certificate of Incorporation as certified by the Secretary of State of the State of Delaware (or a fax or pdf copy of such certificate)) and (iii) the Company's Bylaws, each as in effect at the Closing, in the form attached hereto as Exhibit H.

(viii) The representations and warranties of the Company shall be true and correct in all respects as of the date when made and as of the Closing Date as though made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such specified date) and the Company shall have performed, satisfied and complied in all material respects with the covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by the Company at or prior to the Closing Date. Such Buyer shall have received a certificate, executed by the Chief Executive Officer of the Company, dated as of the Closing Date, to the foregoing effect in the form attached hereto as Exhibit I.

(ix) The Company shall have delivered to such Buyer a letter from the Company's transfer agent certifying the number of shares of Common Stock outstanding as of a date within five (5) days before the Closing Date.

(x) The Common Stock (I) shall be designated for quotation or listed on the Principal Market and (II) shall not have been suspended, as of the Closing Date, by the SEC or the Principal Market from trading on the Principal Market, nor shall suspension by the SEC or the Principal Market have been threatened, as of the Closing Date, either (A) in writing by the SEC or the Principal Market or (B) by falling below the minimum listing maintenance requirements of the Principal Market.

(xi) The Company shall have obtained all governmental, regulatory and third party consents and approvals, if any, necessary for the sale of the Securities and the transactions contemplated by the Transactions Documents and all payments thereunder.

(xii) The Registration Statement shall be effective and available for the issuance and sale of the Securities hereunder and the Company shall have delivered to such Buyer the Prospectus and the Prospectus Supplement as required thereunder.

(xiii) No litigation, statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by or in any court or governmental authority of competent jurisdiction or any self-regulatory organization having authority over the matters contemplated hereby which prohibits the consummation of any of the transactions contemplated by this Agreement.

(xiv) Since the date of this Agreement, no event or series of events shall have occurred that reasonably could be expected to result in a Material Adverse Effect.

(xv) Each of the Lock-Up Agreements shall be in full force and effect, enforceable against each of the parties set forth in Exhibit C hereto in accordance with their terms, and no default under any such Lock-Up Agreement

(xvi) The Voting Agreement shall have been executed and delivered to such Buyer by the Company and each of the Principal Stockholders.

(xvii) The Certificate of Designations in the form attached hereto as Exhibit A shall have been filed with the Secretary of State of the State of Delaware and shall be in full force and effect, enforceable against the Company in accordance with its terms and shall not have been amended.

(xviii) The Company shall have provided to such Buyer the Company's wire instructions, on the Company's letterhead and executed by the Company's Chief Executive Officer or Chief Financial Officer.

8. TERMINATION. In the event that the Closing shall not have occurred with respect to a Buyer on or before five (5) Business Days from the date hereof due to the Company's or such Buyer's failure to satisfy the conditions set forth in Sections 6 and 7 above (and the nonbreaching party's failure to waive such unsatisfied condition(s)), the nonbreaching party shall have the option to terminate this Agreement with respect to such breaching party at the close of business on such date by delivering a written notice to that effect to each other party to this Agreement and without liability of any party to any other party; provided, however, that if this Agreement is terminated pursuant to this Section 8, the Company shall remain obligated to reimburse the Lead Investor or its designee(s), as applicable, for the expenses described in Section 4(f) above.

9. MISCELLANEOUS.

(a) Governing Law; Jurisdiction; Jury Trial. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts

sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address for such notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. **EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

(b) Counterparts. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party; provided that a facsimile or .pdf signature shall be considered due execution and shall be binding upon the signatory thereto with the same force and effect as if the signature were an original, not a facsimile or .pdf signature.

(c) Headings. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement.

(d) Severability. If any provision of this Agreement is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Agreement so long as this Agreement as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

(e) Entire Agreement; Amendments. This Agreement and the other Transaction Documents supersede all other prior oral or written agreements between the Buyers, the Company, their affiliates and Persons acting on their behalf with respect to the matters discussed herein, and this Agreement, the other Transaction Documents and the instruments referenced herein and therein contain the entire understanding of the parties with respect to the matters covered herein and therein and, except as specifically set forth herein or therein, neither the Company nor any Buyer makes any representation, warranty, covenant or undertaking with

respect to such matters. No provision of this Agreement may be amended or waived other than by an instrument in writing signed by the Company and the holders of at least a majority of the aggregate number of the outstanding Preferred Shares issued or issuable hereunder (the “**Required Holders**”), and any amendment or waiver to this Agreement made in conformity with the provisions of this Section 9(e) shall be binding on all Buyers and holders of Securities as applicable. No such amendment shall be effective to the extent that it applies to less than all of the holders of the applicable Securities then outstanding. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any of the Transaction Documents unless the same consideration (other than the reimbursement of legal fees) also is offered to all of the parties to the Transaction Documents, the holders of the Preferred Shares and holders of the Warrants, as the case may be. The Company has not, directly or indirectly, made any agreements with any Buyers relating to the terms or conditions of the transactions contemplated by the Transaction Documents except as set forth in the Transaction Documents. Without limiting the foregoing, the Company confirms that, except as set forth in this Agreement, no Buyer has made any commitment or promise or has any other obligation to provide any financing to the Company or otherwise.

(f) Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon delivery, when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party) or by electronic mail; or (iii) one Business Day after deposit with an overnight courier service, in each case properly addressed to the party to receive the same. The physical addresses and e-mail addresses for such communications shall be:

If to the Company:

Altimune, Inc.
19 Firstfield Road, Suite 200
Gaithersburg, Maryland
Telephone: (240) 654-1450
Attention: William Enright
E-mail: Enright@altimmune.com

with a copy (for informational purposes only) to:

Proskauer Rose LLP
One International Place
Boston, Massachusetts 02110
Telephone: (617) 526-9889
Attention: Ori Solomon
E-mail: osolomon@proskauer.com

If to the Transfer Agent:

Continental Stock Transfer & Trust Company
17 Battery Place, 8th Floor
New York, NY 10004
Telephone: (212)509-4000
Attention: Issac Kagen
E-mail: ikagan@continentalstock.com

If to a Buyer, to its address, facsimile number and e-mail address set forth on the Schedule of Buyers, with copies to such Buyer's representatives as set forth on the Schedule of Buyers,

with a copy (for informational purposes only) to:

Schulte Roth & Zabel LLP
919 Third Avenue
New York, New York 10022
Telephone: (212) 756-2000
Attention: Eleazer N. Klein, Esq.
E-mail: eleazer.klein@srz.com

or to such other address, facsimile number and/or e-mail address and/or to the attention of such other Person as the recipient party has specified by written notice given to each other party five (5) days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent, waiver or other communication, (B) electronically generated by the sender's e-mail containing the time and date of such transmission or (C) provided by an overnight courier service shall be rebuttable evidence of personal service, receipt by email or receipt from an overnight courier service in accordance with clause (i), (ii) or (iii) above, respectively.

(g) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns, including any purchasers of the Preferred Shares or the Warrants. No party hereto shall assign this Agreement or any rights or obligations hereunder except in connection with a Fundamental Transaction. Following the Closing, with the consent of the Company, a Buyer may assign some or all of its rights hereunder in a pro rata matter to a transferee of such Buyer's Preferred Shares or Warrants; (provided such transferee is not a competitor of the Company), in which event, except as otherwise limited hereunder, such assignee shall be deemed to be a Buyer hereunder with respect to such assigned rights.

(h) No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except that each Indemnitee shall have the right to enforce the obligations of the Company with respect to Section 9(k).

(i) Survival. Unless this Agreement is terminated under Section 8, (i) the representations and warranties of the Buyers and the Company contained in Sections 2 and 3, and the agreements and covenants set forth in Sections 4 and 5 shall survive the Closing until the date on which no Warrants or Preferred Shares remain outstanding, except that Section 4(p) shall survive until the termination thereof pursuant to its terms; and (ii) Section 9 shall survive the Closing. Each Buyer shall be responsible only for its own representations, warranties, agreements and covenants hereunder.

(j) Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as are reasonably necessary in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(k) Indemnification.

(i) In consideration of each Buyer's execution and delivery of the Transaction Documents and acquiring the Securities thereunder and in addition to all of the Company's other obligations under the Transaction Documents, the Company shall defend, protect, indemnify and hold harmless each Buyer and all of their stockholders, partners, members, officers, directors, employees and direct or indirect investors and any of the foregoing Persons' agents or other representatives (including, without limitation, those retained in connection with the transactions contemplated by this Agreement) (collectively, the "**Indemnitees**") from and against any and all actions, causes of action, suits, claims, losses, costs, penalties, fees, liabilities and damages, and expenses in connection therewith (irrespective of whether any such Indemnitee is a party to the action for which indemnification hereunder is sought), and including reasonable attorneys' fees and disbursements (the "**Indemnified Liabilities**"), incurred by any Indemnitee as a result of, or arising out of, or relating to (a) any breach of any representation or warranty made by the Company in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (b) any breach of any covenant, agreement or obligation of the Company contained in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby or (c) any cause of action, suit or claim brought or made against such Indemnitee by a third party (including for these purposes a derivative action brought on behalf of the Company) and arising out of or resulting from (i) the execution, delivery, performance or enforcement of the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (ii) any transaction financed or to be financed in whole or in part, directly or indirectly, with the proceeds of the issuance of the Securities, (iii) any disclosure made by such Buyer pursuant to Section 4(j) or (iv) the status of such Buyer or holder of the Securities as an investor in the Company pursuant to the transactions contemplated by the Transaction Documents. To the extent that the foregoing undertaking by the Company may be unenforceable for any reason, the Company shall make the maximum contribution to the payment and satisfaction of each of the Indemnified Liabilities which is permissible under applicable law.

(ii) Promptly after receipt by an Indemnitee under this Section 9(k) of notice of the commencement of any action or proceeding (including any governmental action or proceeding) involving an Indemnified Liability, such Indemnitee shall, if a claim for indemnification in respect thereof is to be made against any indemnifying party under this Section 9(k), deliver to the indemnifying party a written notice of the commencement thereof, and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume control of the defense thereof with counsel mutually satisfactory to the indemnifying

party and the Indemnitee; provided, however, that an Indemnitee shall have the right to retain its own counsel with the fees and expenses of not more than one counsel for such Indemnitee to be paid by the indemnifying party, if, in the written opinion of outside counsel to the Indemnitee, the representation by such counsel of the Indemnitee and the indemnifying party would be inappropriate due to actual or potential differing interests between such Indemnitee and any other party represented by such counsel in such proceeding. Legal counsel referred to in the immediately preceding sentence shall be selected by the Required Holders. The Indemnitee shall cooperate fully with the indemnifying party in connection with any negotiation or defense of any such action or Indemnified Liabilities by the indemnifying party and shall furnish to the indemnifying party all information reasonably available to the Indemnitee that relates to such action or Indemnified Liabilities. The indemnifying party shall keep the Indemnitee fully apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. No indemnifying party shall be liable for any settlement of any action, claim or proceeding effected without its prior written consent, provided, however, that the indemnifying party shall not unreasonably withhold, delay or condition its consent. No indemnifying party shall, without the prior written consent of the Indemnitee, consent to entry of any judgment or enter into any settlement or other compromise which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnitee of a release from all liability in respect to such Indemnified Liabilities or litigation. Following indemnification as provided for hereunder, the indemnifying party shall be subrogated to all rights of the Indemnitee with respect to all third parties, firms or corporations relating to the matter for which indemnification has been made. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action shall not relieve such indemnifying party of any liability to the Indemnitee under this Section 9(k), except to the extent that the indemnifying party is prejudiced in its ability to defend such action.

(iii) The indemnification required by this Section 9(k) shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or Indemnified Liabilities are incurred.

(iv) The indemnity agreements contained herein shall be, in addition to (x) any cause of action or similar right of the Indemnitee against the indemnifying party or others, and (y) any liabilities the indemnifying party may be subject to pursuant to the law.

(v) Any Indemnified Liability for which any Indemnitee is entitled to indemnification under this Section 9(k) shall be determined without duplication of recovery by reason of the state of facts giving rise to such Indemnified Liability constituting a breach of one or more representation, warranty or covenant.

(l) No Strict Construction. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party.

(m) Remedies. Each Buyer shall have all rights and remedies set forth in the Transaction Documents and all rights and remedies which such holders have been granted at any time under any other agreement or contract and all of the rights which such Buyers have under any law. Any Person having any rights under any provision of this Agreement shall be entitled to enforce such rights specifically (without posting a bond or other security), to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law. Furthermore, the Company recognizes that in the event that it fails to perform, observe, or discharge any or all of its obligations under the Transaction Documents, any remedy at law may prove to be inadequate relief to the Buyers. The Company therefore agrees that the Buyers shall be entitled to seek temporary and permanent injunctive relief in any such case without the necessity of proving actual damages and without posting a bond or other security.

(n) Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) the Transaction Documents, whenever any Buyer exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Buyer may rescind or withdraw, in its sole discretion from time to time prior to the time the Company shall perform such related obligations, upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

(o) Payment Set Aside. To the extent that the Company makes a payment or payments to the Buyers hereunder or pursuant to any of the other Transaction Documents or the Buyers enforce or exercise their rights hereunder or thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, foreign, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

(p) Note Purchase Agreement. The Company and each of the Buyers (other than the Lead Investor) hereby acknowledge and agree that (i) the closing of the transactions contemplated by this Agreement constitutes the "Second Closing" pursuant to that certain Convertible Promissory Note Purchase Agreement, dated as of January 18, 2017, by and among Altimune, Inc. (together with its successors, "**Private Altimune**") and the purchasers listed

on the Schedule of Purchasers attached as Exhibit A-1 thereto (the “NPA”), (ii) the purchase of Preferred Shares and Warrants hereunder fully satisfies the obligation of each such Buyer to purchase Pubco Shares (as defined in the NPA) pursuant to Section 1.4 of the NPA, and (iii) upon the closing of the purchase of Preferred Shares and Warrants as contemplated hereby against payment therefor by a Buyer hereunder, the NPA is hereby terminated and of no further force and effect with respect to such Buyer, the Company or Private Altimmune, and such Buyer shall have no further rights or obligations thereunder or related thereto.

(q) Independent Nature of Buyers’ Obligations and Rights. The obligations of each Buyer under any Transaction Document are several and not joint with the obligations of any other Buyer, and no Buyer shall be responsible in any way for the performance of the obligations of any other Buyer under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Buyer pursuant hereto or thereto, shall be deemed to constitute the Buyers as, and the Company acknowledges, and each Buyer confirms, that the Buyers do not so constitute, a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Buyers are in any way acting in concert or as a group, and the Company will not assert any such claim with respect to such obligations or the transactions contemplated by the Transaction Documents and the Company acknowledges, and each Buyer confirms, that the Buyers are not acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. The Company acknowledges and each Buyer confirms that it has independently participated in the negotiation of the transaction contemplated hereby with the advice of its own counsel and advisors. Each Buyer shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Agreement or out of any other Transaction Documents, and it shall not be necessary for any other Buyer to be joined as an additional party in any proceeding for such purpose.

[Signature Page Follows]

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

COMPANY:

ALTIMMUNE, INC.

By: /s/ William Enright
Name: William Enright
Title: President and Chief Executive Officer

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYER:

HUDSON BAY MASTER FUND LTD.

By: Hudson Bay Capital Management LP, as its
Investment Manager

By: /s/ George Antonopoulos

Name: George Antonopoulos

Title: Authorized Signatory

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

**ALEXANDRIA VENTURE INVESTMENTS,
LLC**

By: Alexandria Real Estate Equities, Inc., its
managing member

By: /s/ Aaron Jacobson
Name: Aaron Joacobson
Title: VP – Corporate Counsel

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

/s/ Scott A. Powell

Name: Scott A. Powell

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

/s/ David Leon Ashford

Name: David Leon Ashford

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

/s/ John N. Lauriello

Name: John N. Lauriello

*[Signature Page to Securities
Purchase Agreement]*

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BUYERS:

**PRIVATE MARKET INVESTMENT FUND II,
LLC**

By: Fidelis Capital, LLC
Its: Authorized Representative

By: /s/ Steven M. Dauphin
Name: Steven M. Dauphin
Title: Member

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

TREBLE RANGE PARTNERS II, LLC

By: /s/ Steven M. Dauphin
Name: Steven M. Dauphin
Title: Partner

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

/s/ Robert J. Lauf

Name: Robert J. Lauf

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

/s/ Philip F. Lauf

Name: Philip F. Lauf

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

**DEANN HICKMAN GILES REVOCABLE
TRUST**

By: /s/ DeAnn Hickman Giles
Name: DeAnn Hickman Giles
Title: Trustee

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

/s/ Julie Giles Parkes

Name: Julie Giles Parkes

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

/s/ Kent R. Van Kampen

Name: Kent R. Van Kampen

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

RUDY VAN KAMPEN FAMILY PARTNERSHIP

By: /s/ Kent R. Van Kampen
Name: Kent R. Van Kampen
Title: General Partner

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

NOVARTIS BIOVENTURES, LTD

By: /s/ Anja Konig
Name: Anja Konig
Title: Authorized Signatory

By: /s/ Bartosz Dzikowski
Name: Bartosz Dzikowski
Title: Authorized Signatory

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

HEALTHCAP V LP

By HealthCap V GP SA

By: /s/ Edgar Phillipin
Name: Edgar Phillipin
Title: By proxy

By: /s/ Dag Richter
Name: Dag Richter
Title: Director

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

TRUFFLE FORTUNE 4 FCPI

By: /s/ Philippe Pouletty
Name: Philippe Pouletty
Title: Managing Partner

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

UFF UNNOVATION 15 FCPI

By: /s/ Philippe Pouletty
Name: Philippe Pouletty
Title: Managing Partner

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

UFF UNNOVATION 14 FCPI

By: /s/ Philippe Pouletty
Name: Philippe Pouletty
Title: Managing Partner

*[Signature Page to Securities
Purchase Agreement]*

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

BUYERS:

OFCO CLUB V

By: /s/ Jacob Gunterberg and Bjorn Odlander
Name: Jacob Gunterberg and Bjorn Odlander
Title: Authorized Signatories

*[Signature Page to Securities
Purchase Agreement]*

EXHIBITS

Exhibit A	Form of Certificate of Designations
Exhibit B	Form of Warrant
Exhibit C	Parties to Lock-Up Agreement
Exhibit D	Form of Lock-Up Agreement
Exhibit E	Form of Voting Agreement
Exhibit F	Form of Irrevocable Transfer Agent Instructions
Exhibit G	Form of Opinion of Company's Counsel
Exhibit H	Form of Secretary's Certificate
Exhibit I	Form of Officer's Certificate

SCHEDULES

Schedule I	List of General Use Free Writing Prospectus
Schedule 3(c)	Significant Subsidiaries
Schedule 3(f)	Equity Capitalization
Schedule 3(zz)	Indebtedness

SCHEDULE OF BUYERS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Buyer</u>	<u>Address, Facsimile Number and Email</u>	<u>Number of Preferred Shares</u>	<u>Number of Warrant Shares</u>	<u>Purchase Price</u>	<u>Legal Representative's Address, Facsimile Number and Email</u>	<u>Election to be subject to the Maximum Percentage (as defined in the Certificate of Designations):</u>
Hudson Bay Master Fund Ltd.		10,638.298	1,593,753	\$ 10,000,000	Schulte Roth & Zabel LLP 919 Third Avenue New York, New York 10022 Attention: Eleazer Klein, Esq. Facsimile: (212) 593-5955 Telephone: (212) 756-2376	Yes
Novartis Bioventures Ltd.		3,104.447	465,086	\$ 2,918,180.00		No
HealthCap V LP		305.787	45,811	\$ 287,440.00		No
UFF Innovation 14 FCPI		204.894	30,696	\$ 192,600.00		No
UFF Innovation 15 FCPI		273.191	40,927	\$ 256,800.00		No
Truffle Fortune 4 FCPI		204.894	30,696	\$ 192,600.00		No
Alexandria Venture Investments, LLC		310.447	46,509	\$ 291,820.00		No
Robert J. Lauf		15.521	2,325	\$ 14,590.00		No
Philip F. Lauf		7.447	1,116	\$ 7,000.00		No
Julie Giles Parkes		6.213	931	\$ 5,840.00		No
Rudy Van Kampen Family Partnership		3.106	465	\$ 2,920.00		No
Dr. Kent R. Van Kampen, D.V.M., Ph.D.		3.106	465	\$ 2,920.00		No
OFCO Club V		4.660	698	\$ 4,380.00		No
Scott A. Powell		62.085	9,301	\$ 58,360.00		No
Private Market Investment Fund II, LLC		381.234	57,114	\$ 358,360.00		No
Treble Range Partners II, LLC		31.043	4,651	\$ 29,180.00		No
David Leon Ashford		62.085	9,301	\$ 58,360.00		No
John N. Lauriello		31.043	4,651	\$ 29,180.00		No
DeAnn Hickman Giles Revocable Trust		6.213	931	\$ 5,840.00		No
TOTAL		15,655.714	2,345,427	\$ 14,716,370		

EXHIBIT D

ALTIMMUNE, INC.

August __, 2017

Altimune, Inc.
19 Firstfield Road
Gaithersburg, MD 20878
Telephone: (240) 654-1450
Attention: William Enright, Chief Executive Officer
E-mail: benright@altimmune.com

Re: Altimune, Inc. - Lock-Up Agreement

This Lock-Up Agreement is being delivered to you in connection with the Securities Purchase Agreement (the “**Securities Purchase Agreement**”), dated as of August __, 2017 (the “**Subscription Date**”) by and among Altimune, Inc. (the “**Company**”) and the investors party thereto (the “**Buyers**”), with respect to the issuance of (i) shares of Series B Convertible Preferred Stock of the Company, par value \$0.0001 per share (the “**Preferred Shares**”), which are convertible into shares of common stock of the Company, par value \$0.0001 per share (the “**Common Stock**”) pursuant to the terms of the Certificate of Designations, Preferences and Rights of Series B Preferred Shares and (ii) warrants, which are exercisable to purchase shares of Common Stock. Capitalized terms used herein and not otherwise defined herein shall have the respective meanings set forth in the Securities Purchase Agreement.

In order to induce the Buyers to enter into the Securities Purchase Agreement, the undersigned agrees that, commencing on the date hereof and ending on the earlier of (x) the first (1st) anniversary of the Closing Date and (y) the date on which no Preferred Shares are outstanding (the “**Lock-Up Period**”), the undersigned will not, directly or indirectly (including, without limitation, through any entity controlled by the undersigned), (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase, make any short sale or otherwise dispose of or agree to dispose of, directly or indirectly, any shares of Common Stock or Common Stock Equivalents, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities and Exchange Act of 1934, as amended and the rules and regulations of the Securities and Exchange Commission promulgated thereunder with respect to any shares of Common Stock or Common Stock Equivalents owned directly by the undersigned (including holding as a custodian) or with respect to which the undersigned has beneficial ownership within the rules and regulations of the Securities and Exchange Commission (collectively, the “**Undersigned’s Shares**”), or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any of the Undersigned’s Shares, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of shares of Common Stock or other securities, in cash or otherwise, (iii) make any demand for or exercise any right or cause to be filed a registration statement, including any amendments thereto, with respect to the registration of any shares of Common Stock or Common Stock Equivalents or (iv) publicly disclose the intention to do any of the foregoing.

The foregoing restriction is expressly agreed to preclude the undersigned, directly or indirectly (including, without limitation, through any entity controlled by the undersigned), from engaging in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Undersigned’s Shares even if the Undersigned’s Shares would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include, without limitation, any short sale or any purchase, sale or grant of any right (including, without limitation, any put or call option) with respect to any of the Undersigned’s Shares or with respect to any security that includes, relates to, or derives any significant part of its value from the Undersigned’s Shares.

Notwithstanding the foregoing, the undersigned may transfer the Undersigned's Shares (a) (i) as a *bona fide* gift or gifts, provided that the donee or donees thereof agree to be bound in writing by the restrictions set forth herein, (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, (iii) issued pursuant to an exchange of Company's options that are out-of-the-money with the Company; provided that any securities issued upon such exchange shall then become subject to the lockup provisions contained in this Agreement or (iv) by operation of law pursuant to a qualified domestic order or in connection with a divorce settlement or other court order, (b) acquired pursuant to the acquisition or exercise of any stock option issued pursuant to the Company's existing stock option plan or omnibus incentive plan, provided that any securities issued upon such acquisition or exercise, as applicable, shall then become subject to the lockup provisions contained in this Agreement, (c) pursuant to a plan, contract or instruction that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B) that was in effect prior to the date hereof provided that such plan, contract or instruction is not amended, modified or changed on or after the Subscription Date or (d) if any affiliate of the undersigned is a corporation, partnership, limited liability company, trust or other business entity, (1) to another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate of the undersigned or (2) as distributions to the partners, limited liability company members or stockholders of the undersigned or holders of similar equity interest in the undersigned, provided, in each case, that the transferee then becomes subject to the lockup provisions contained in this Agreement; provided, further, that notwithstanding the immediately preceding proviso, the transferees of 1,278,471 of the Undersigned's Shares held as of the date hereof by Redmont VAXN Capital Holdings, LLC shall not be required to become subject to the lockup provisions contained in this Agreement solely if such transfer occurs after the date the Company obtains Stockholder Approval¹. For purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. None of the restrictions set forth in this Lock-Up Agreement shall apply to Common Stock acquired in open market transactions after the date hereof. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent (the "**Transfer Agent**") and registrar against the transfer of the Undersigned's Shares except in compliance with the foregoing restrictions.

In order to enforce this covenant, the Company may impose irrevocable stop-transfer instructions preventing the Transfer Agent from effecting any actions in violation of this Lock-Up Agreement.

The undersigned acknowledges that the execution, delivery and performance of this Lock-Up Agreement is a material inducement to each Buyer to complete the transactions contemplated by the Securities Purchase Agreement and that the Company shall be entitled to specific performance of the undersigned's obligations hereunder. The undersigned hereby represents that the undersigned has the power and authority to execute, deliver and perform this Lock-Up Agreement, that the undersigned has received adequate consideration therefor and that the undersigned will indirectly benefit from the closing of the transactions contemplated by the Securities Purchase Agreement.

The undersigned understands and agrees that this Lock-Up Agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors, and assigns.

¹ To be inserted solely in the Lockup Agreement of Philip Hodges.

This Lock-Up Agreement may be executed in two counterparts, each of which shall be deemed an original but both of which shall be considered one and the same instrument.

This Lock-Up Agreement will be governed by and construed in accordance with the laws of the State of New York, without giving effect to any choice of law or conflicting provision or rule (whether of the State of New York, or any other jurisdiction) that would cause the laws of any jurisdiction other than the State of New York to be applied. In furtherance of the foregoing, the internal laws of the State of New York will control the interpretation and construction of this Lock-Up Agreement, even if under such jurisdiction's choice of law or conflict of law analysis, the substantive law of some other jurisdiction would ordinarily apply.

[Remainder of page intentionally left blank]

Very truly yours,

Exact Name of Shareholder

Authorized Signature

Title

Agreed to and Acknowledged:

ALTIMMUNE, INC.

By: _____
Name:
Title:

EXHIBIT E

VOTING AGREEMENT

VOTING AGREEMENT, dated as of August __, 2017 (this “**Agreement**”), by and between Altimmune, Inc., a Delaware corporation (the “**Company**”), and the stockholder listed on the signature page hereto under the heading “**Stockholder**”.

WHEREAS, the Company and certain investors (each, an “**Investor**”, and collectively, the “**Investors**”) have entered into a Securities Purchase Agreement, dated as of August __, 2017 (the “**Securities Purchase Agreement**”), pursuant to which, among other things, the Company has agreed to issue and sell to the Investors and the Investors have agreed to purchase (i) shares of Series B Convertible Preferred Stock of the Company, par value \$0.0001 per share (the “**Preferred Shares**”), which are convertible into shares of common stock of the Company, par value \$0.0001 per share (the “**Common Stock**”) pursuant to the terms of the Certificate of Designations, Preferences and Rights of Series B Preferred Shares and (ii) warrants, which are exercisable to purchase shares of Common Stock.

WHEREAS, as of the date hereof, the Stockholder owns at least [●] shares of Common Stock, which represents at least [●]¹% of the total issued and outstanding capital stock of the Company; and

WHEREAS, as a condition to the willingness of the Investors to enter into the Securities Purchase Agreement and to consummate the transactions contemplated thereby (collectively, the “**Transaction**”), the Investors have required that the Stockholder agree, and in order to induce the Investors to enter into the Securities Purchase Agreement, the Stockholder has agreed, to enter into this Agreement with respect to all the Common Stock now owned and which may hereafter be acquired by the Stockholder prior to the date the Company obtains Stockholder Approval (as defined in the Securities Purchase Agreement) and any other securities, if any, which the Stockholder is currently entitled to vote, or after the date hereof, becomes entitled to vote prior to the date the Company obtains the Stockholder Approval, at any meeting of stockholders of the Company (the “**Other Securities**”).

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and agreements contained herein, and intending to be legally bound hereby, the parties hereto hereby agree as follows:

ARTICLE I

VOTING AGREEMENT OF THE STOCKHOLDER

SECTION 1.01. Voting Agreement. Subject to the last sentence of this Section 1.01, each Stockholder hereby agrees that at any meeting of the stockholders of the Company, however called, and in any action by written consent of the Company’s stockholders, the Stockholder shall vote its shares of Common Stock and its Other Securities, if applicable: (a) in favor of the Stockholder Approval; and (b) against any proposal or any other corporate action or agreement that would result in a breach of any covenant, representation or warranty or any other obligation or agreement of the Company under the Securities Purchase Agreement or which

¹ Percentage of voting agreement parties in total to be not less than 38%.

could result in any of the conditions to the Company's obligations under the Securities Purchase Agreement not being fulfilled, as determined in good faith by the Company's officers or board of directors. The Stockholder acknowledges receipt and review of a copy of the Securities Purchase Agreement and the other Transaction Documents (as defined in the Securities Purchase Agreement). The obligations of the Stockholder under this Section 1.01 shall terminate immediately following the occurrence of the Stockholder Approval.

ARTICLE II

REPRESENTATIONS AND WARRANTIES OF THE STOCKHOLDER

The Stockholder hereby represents and warrants to each of the Investors as follows:

SECTION 2.01. Authority Relative to This Agreement. The Stockholder has all necessary legal capacity, power and authority to execute and deliver this Agreement and to perform his or its obligations hereunder. This Agreement has been duly executed and delivered by such Stockholder and, assuming due authorization, execution and delivery of this Agreement by the Company, constitutes a legal, valid and binding obligation of such Stockholder, enforceable against such Stockholder in accordance with its terms, except (a) as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or similar laws now or hereafter in effect relating to, or affecting generally the enforcement of creditors' and other obligees' rights, (b) where the remedy of specific performance or other forms of equitable relief may be subject to certain equitable defenses and principles and to the discretion of the court before which the proceeding may be brought, and (c) where rights to indemnity and contribution thereunder may be limited by applicable law and public policy.

SECTION 2.02. No Conflict. (a) The execution and delivery of this Agreement by the Stockholder does not, and the performance of this Agreement by the Stockholder shall not, (i) conflict with or violate any federal, state or local law, statute, ordinance, rule, regulation, order, judgment or decree applicable to such Stockholder or by which the Common Stock or the Other Securities owned by the Stockholder are bound or affected or (ii) result in any breach of or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, or result in the creation of a lien or encumbrance on any of the Common Stock or the Other Securities owned by the Stockholder, if any, pursuant to, any note, bond, mortgage, indenture, contract, agreement, lease, license, permit, franchise or other instrument or obligation to which the Stockholder is a party or by which the Stockholder or the Common Stock or Other Securities owned by the Stockholder are bound.

(b) The execution and delivery of this Agreement by the Stockholder does not, and the performance of this Agreement by the Stockholder shall not, require any consent, approval, authorization or permit of, or filing with or notification to, any governmental entity by the Stockholder.

SECTION 2.03. Title to the Stock. As of the date hereof, the Stockholder is the owner of the number of shares of Common Stock set forth opposite its name on Appendix A

attached hereto, entitled to vote, without restriction, on all matters brought before holders of capital stock of the Company, which Common Stock represent on the date hereof the percentage of the outstanding stock and voting power of the Company set forth on such Appendix. Such Common Stock are all the securities of the Company owned, either of record or beneficially, by the Stockholder. Such Common Stock are owned free and clear of all security interests, liens, claims, pledges, options, rights of first refusal, agreements, limitations on the Stockholder's voting rights, charges and other encumbrances of any nature whatsoever. The Stockholder has not appointed or granted any proxy, which appointment or grant is still effective, with respect to its shares of Common Stock or Other Securities, if any, owned by the Stockholder.

ARTICLE III

COVENANTS

SECTION 3.01. No Disposition or Encumbrance of Stock. The Stockholder hereby covenants and agrees that, until the Stockholder Approval has been obtained, except as contemplated by this Agreement, the Stockholder shall not offer or agree to sell, transfer, tender, assign, hypothecate or otherwise dispose of, grant a proxy or power of attorney with respect to, or create or permit to exist any security interest, lien, claim, pledge, option, right of first refusal, agreement, limitation on such Stockholder's voting rights (except for such agreements or limitations that would not adversely affect the Stockholder's ability to perform its obligations under this Agreement), charge or other encumbrance of any nature whatsoever ("**Encumbrance**") with respect to its shares of Common Stock or Other Securities, directly or indirectly, initiate, solicit or encourage any person to take actions which could reasonably be expected to lead to the occurrence of any of the foregoing; provided, however, that the Stockholder may assign, sell or transfer any Common Stock or Other Securities provided that any such recipient of the Common Stock or Other Securities has delivered to the Company a written agreement in form and substance substantially similar to this Agreement.

SECTION 3.02. Company Cooperation. The Company hereby covenants and agrees that it will not, and such Stockholder irrevocably and unconditionally acknowledges and agrees that the Company will not (and waives any rights against the Company in relation thereto), recognize any Encumbrance or agreement on any of the Common Stock or Other Securities subject to this Agreement unless the provisions of Section 3.01 have been complied with.

ARTICLE IV

MISCELLANEOUS

SECTION 4.01. Further Assurances. The Stockholder will execute and deliver such proxies, powers of attorney and similar documents and instruments and take all further action as may be reasonably necessary in order to consummate the transactions contemplated by Section 1.01 hereof.

SECTION 4.02. Specific Performance. The parties hereto agree that irreparable damage would occur in the event any provision of this Agreement was not performed in accordance with the terms hereof and that the Company shall be entitled to specific performance of the terms hereof, in addition to any other remedy at law or in equity.

SECTION 4.03. Entire Agreement. This Agreement constitutes the entire agreement among the Company and the Stockholders with respect to the subject matter hereof and supersedes all prior agreements and understandings, both written and oral, among the Company and the Stockholders with respect to the subject matter hereof.

SECTION 4.04. Amendment. The provisions of this Agreement may not be amended or waived, nor may this Agreement be terminated by the Company other than pursuant to the provisions of Section 4.07.

SECTION 4.05. Severability. If any provision of this Agreement is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Agreement so long as this Agreement as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

SECTION 4.06. Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. The parties hereby agree that all actions or proceedings arising directly or indirectly from or in connection with this Agreement shall be litigated only in the Supreme Court of the State of New York or the United States District Court for the Southern District of New York located in New York County, New York. The parties consent to the jurisdiction and venue of the foregoing courts and consent that any process or notice of motion or other application to any of said courts or a judge thereof may be served inside or outside the State of New York or the Southern District of New York by registered mail, return receipt requested, directed to the party being served at its address set forth on the signature pages to this Agreement (and service so made shall be deemed complete three (3) days after the same has been posted as aforesaid) or by personal service or in such other manner as may be permissible under the rules of said courts. Each of the Company and each Stockholder irrevocably waives, to the fullest extent permitted by law, any objection which it may now or hereafter have to the laying of the venue of any such suit, action, or proceeding brought in such a court and any claim that suit, action, or proceeding has been brought in an inconvenient forum. **EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

SECTION 4.07. Termination. This Agreement shall terminate immediately following the occurrence of the Stockholder Approval. In the event that (i) the Stockholder fully complies with its obligations pursuant to Sections 1.01, 3.01 and 4.01, and (ii) the Stockholder Approval is obtained by the Company, then the Stockholder shall not have any further liability hereunder for any action, failure to act, event, circumstance or condition, whether the same shall occur before or after the time the Stockholder Approval is obtained by the Company.

[Signature Page Follows]

**CERTIFICATE OF DESIGNATIONS, PREFERENCES
AND RIGHTS OF SERIES B CONVERTIBLE PREFERRED STOCK
OF
ALTIMMUNE, INC.**

Altimune, Inc. (the “**Company**”), a corporation organized and existing under the General Corporation Law of the State of Delaware (the “**DGCL**”), does hereby certify that, pursuant to authority conferred upon the Board of Directors of the Company (the “**Board**”) by the Certificate of Incorporation, as amended, of the Company, and pursuant to the provisions of the DGCL, the Board adopted resolutions (i) designating a series of the Company’s previously authorized preferred stock, par value \$0.0001 per share, and (ii) providing for the designations, preferences and relative, participating, optional or other rights, and the qualifications, limitations or restrictions thereof, of sixteen thousand (16,000) shares of Series B Convertible Preferred Stock of the Company, as follows:

RESOLVED, that the Company is authorized to issue sixteen thousand (16,000) shares of Series B Convertible Preferred Stock, par value \$0.0001 per share (the “**Series B Preferred Shares**”), which shall have the following powers, designations, preferences and other special rights:

(1) Ranking. The Series B Preferred Shares shall rank prior and superior to all of the Common Stock and any other capital stock of the Company with respect to the preferences as to dividends, distributions and payments upon the liquidation, dissolution and winding up of the Company. The rights of the shares of Common Stock and other capital stock of the Company shall be of junior rank to and subject to the preferences and relative rights of the Series B Preferred Shares.

(2) Payments of Stated Value; Prepayment. On each Installment Date, the Company shall pay to each Holder an amount equal to the Installment Amount due on such Installment Date in accordance with Section 9. If any Series B Preferred Shares remain outstanding on the Maturity Date after giving effect to any Company Conversions and Company Redemptions occurring on such date in accordance with Section 9, the Company shall redeem such Series B Preferred Shares in cash in an amount equal to the Conversion Amount for each such Series B Preferred Share. The “**Maturity Date**” shall be August 16, 2018, as may be extended at the option of each Holder (i) in the event that, and for so long as, a Triggering Event of a type set forth in Sections 6(a)(i), (ii), (iii), (iv), (v), (xii) or (xiii) shall have occurred and be continuing on the Maturity Date (as may be extended pursuant to this Section 2) through the date that is ten (10) Trading Days after the curing of any such Triggering Event, and (ii) through the date that is ten (10) Business Days after the consummation of a Change of Control in the event that a Change of Control is publicly announced or a Change of Control Notice (as defined in Section 8(a)) is delivered prior to the Maturity Date. Other than as specifically permitted by this Certificate of Designations, the Company may not prepay any portion of the outstanding Stated Value.

(3) Liquidation.

(a) **Preferential Payment to Holders.** In the event of a Liquidation Event, holders of record of Series B Preferred Shares (each, a “**Holder**” and collectively, the “ **Holders**”) shall be entitled to receive in cash out of the assets of the Company, whether from capital or from earnings available for distribution to its stockholders (the “**Liquidation Funds**”) upon such Liquidation Event, but before any amount shall be paid to the holders of any of the capital stock of the Company of any class junior in rank to the Series B Preferred Shares in respect of the preferences as to distributions and payments upon such Liquidation Event (such stock being referred to hereinafter collectively as “**Junior Stock**”), an amount per Series B Preferred Share equal to the Conversion Amount; provided that, if the Liquidation Funds are insufficient to pay the full amount due to the Holders and holders of shares of other classes or series of preferred stock of the Company, if any, that are of equal rank with the Series B Preferred Shares as to payments of Liquidation Funds (such stock being referred to hereinafter collectively as “**Pari Passu Stock**”), if any, then each Holder and each holder of any such Pari Passu Stock shall receive a percentage of the Liquidation Funds equal to the full amount of Liquidation Funds that would be payable to such Holder as a liquidation preference, in accordance with their respective Certificate of Designations, Preferences and Rights, as a percentage of the full amount of Liquidation Funds that would be payable to all holders of Series B Preferred Shares and Pari Passu Stock if the Liquidation Funds were sufficient to pay the full amount due to the holders of Series B Preferred Shares and Pari Passu Stock.

(b) **Distribution of Remaining Assets.** In the event of a Liquidation Event, after payment of all preferential amounts required to be paid to the Holders pursuant to Section 3(a), the remaining assets of the Company available for distribution to its stockholders shall be distributed among the holders of shares of Junior Stock in accordance with their respective rights and privileges.

(4) Dividends.

(a) From and after the first date of issuance of any Series B Preferred Shares (the “**Issuance Date**”), the Holders shall be entitled to receive dividends per Series B Preferred Share when, as and if declared by the Board.

(b) In addition to the dividends, if any, referred to in Section 4(a), from and after the Issuance Date, the Holders shall be entitled to receive such dividends paid and distributions made to the holders of Common Stock to the same extent as if such Holders had converted the Series B Preferred Shares into Common Stock at the Conversion Price (without regard to any limitations on conversion, including, without limitation, the applicable Maximum Percentage) and had held such shares of Common Stock on the record date for such dividends and distributions. Payments under the preceding sentence shall be made concurrently with the dividend or distribution to the holders of Common

Stock. Following the occurrence of a Liquidation Event and the payment in full to a Holder of its applicable liquidation preference as set forth in Section 3 above, such Holder shall cease to have any rights hereunder to participate in any future dividends or distributions made to the holders of Common Stock. The Company shall not declare or pay any dividends on any Junior Stock or Pari Passu Stock unless the Holders of Series B Preferred Shares then outstanding shall simultaneously receive a dividend on a pro rata basis as if the Series B Preferred Shares had been converted into shares of Common Stock pursuant to Section 5 at the then applicable Conversion Rate (as defined in Section 5(b)) immediately prior to the record date for determining the stockholders eligible to receive such dividends (without regard to any limitations on conversion, including, without limitation, the applicable Maximum Percentage). Notwithstanding the foregoing, to the extent that a Holder's right to participate in any such dividend or distribution pursuant to this Section 4 would result in such Holder and its other Attribution Parties exceeding the applicable Maximum Percentage, then such Holder shall not be entitled to participate in such dividend or distribution to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such dividend or distribution (and beneficial ownership) to such extent) and the portion of such dividend or distribution shall be held in abeyance for such Holder until such time or times as its right thereto would not result in such Holder and its other Attribution Parties exceeding the applicable Maximum Percentage, at which time or times such Holder shall be granted such rights (and any rights under this Section 4 on such initial rights or on any subsequent such rights to be held similarly in abeyance) to the same extent as if there had been no such limitation.

(5) Conversion of Series B Preferred Shares. Series B Preferred Shares shall be convertible into shares of Common Stock, on the terms and conditions set forth in this Section 5.

(a) Holder's Conversion Right. Subject to the provisions of Section 5(e), at any time or times on or after the Issuance Date, any Holder shall be entitled to convert any whole number of Series B Preferred Shares, plus the amount of any accrued but unpaid dividends per Series B Preferred Share then remaining and any Late Charges thereon, into fully paid and nonassessable shares of Common Stock in accordance with this Section 5 at the Conversion Rate.

(b) Conversion. The number of shares of Common Stock issuable upon conversion of each Series B Preferred Share pursuant to Section 5(a) shall be determined according to the following formula (the "**Conversion Rate**"):

$$\frac{\text{Conversion Amount}}{\text{Conversion Price}}$$

No fractional shares of Common Stock are to be issued upon the conversion of any Series B Preferred Share, but rather the number of shares of Common Stock

to be issued shall be rounded up to the nearest whole number. The applicable Conversion Rate and Conversion Price from time to time in effect is subject to adjustment as hereinafter provided.

(c) Mechanics of Conversion. The conversion of Series B Preferred Shares shall be conducted in the following manner:

(i) Holder's Delivery Requirements. To convert Series B Preferred Shares into shares of Common Stock on any date (a "**Conversion Date**"), a Holder shall (A) transmit by electronic mail (or otherwise personally deliver), for receipt on or prior to 4:59 p.m., New York City Time, on such date, a copy of a properly completed notice of conversion executed by the registered Holder of the Series B Preferred Shares subject to such conversion in the form attached hereto as Exhibit I (the "**Conversion Notice**") to the Company and (B) if required by Section 5(c)(vii), but without delaying the Company's requirement to deliver shares of Common Stock on the applicable Share Delivery Date (as defined below), surrender to a common carrier for delivery to the Company as soon as practicable following such date the original certificates representing the Series B Preferred Shares being converted (or compliance with the procedures set forth in Section 18) (the "**Series B Preferred Stock Certificates**").

(ii) Company's Response. Upon receipt by the Company of copy of a Conversion Notice, the Company shall (I) as soon as practicable, but in any event within one (1) Trading Day, send, via electronic mail, a confirmation of receipt of such Conversion Notice to such Holder and the Company's transfer agent (the "**Transfer Agent**"), which confirmation shall constitute an instruction to the Transfer Agent to process such Conversion Notice in accordance with the terms herein and (II) on or before the earlier of (A) the number of Trading Days comprising the Standard Settlement Period and (B) the third (3rd) Trading Day, in each case, following the date of receipt by the Company of such Conversion Notice (a "**Share Delivery Date**"), (1) provided the Transfer Agent is participating in the Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program, credit such aggregate number of shares of Common Stock to which such Holder shall be entitled to such Holder's or its designee's balance account with DTC through its Deposit/Withdrawal at Custodian ("**DWAC**") system, or (2) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and deliver to the address as specified in the Conversion Notice, a certificate, registered in the name of such Holder or its designee, for the number of shares of Common Stock to which such Holder shall be entitled. If the number of Series B Preferred Shares represented by the Series B Preferred

Stock Certificate(s) submitted for conversion, as may be required pursuant to Section 5(c)(vii), is greater than the number of Series B Preferred Shares being converted, then the Company shall, as soon as practicable and in no event later than three (3) Business Days after receipt of the Series B Preferred Stock Certificate(s) (the “**Preferred Stock Delivery Date**”) and at its own expense, issue and deliver to such Holder a new Series B Preferred Stock Certificate representing the number of Series B Preferred Shares not converted. In the event that a Holder elects to convert a portion of the Stated Value of such Holder’s Series B Preferred Shares prior to any applicable Installment Date, the Conversion Amount so converted shall be deducted in reverse order starting from the final Installment Amount to be paid hereunder to such Holder on the final Installment Date, unless such Holder otherwise indicates and allocates among any Installment Dates hereunder in the applicable Conversion Notice.

(iii) Dispute Resolution. In the case of a dispute as to the determination of the Weighted Average Price, Closing Bid Price or the Closing Sale Price or the arithmetic calculation of the Conversion Rate, the Conversion Price or any Redemption Price, the Company shall instruct the Transfer Agent to issue to such Holder the number of shares of Common Stock that is not disputed and the Company shall submit the disputed determinations or arithmetic calculations via electronic mail within one (1) Business Day of receipt, or deemed receipt, of the Conversion Notice or Redemption Notice or other event giving rise to such dispute, as the case may be, to the applicable Holder. If such Holder and the Company are unable to agree upon such determination or calculation within one (1) Business Day of such disputed determination or arithmetic calculation being submitted to such Holder, then the Company shall, within one (1) Business Day submit via electronic mail (a) the disputed determination of the Weighted Average Price, the Closing Bid Price or the Closing Sale Price to an independent, reputable investment bank selected by the Company and approved by such Holder (such approval not to be unreasonably conditioned, withheld or delayed), or (b) the disputed arithmetic calculation of the Conversion Rate, Conversion Price or any Redemption Price to an independent, outside accountant, selected by the Company and approved by such Holder (such approval not to be unreasonably conditioned, withheld or delayed). The Company shall cause the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the applicable Holder of the results no later than five (5) Business Days from the time it receives the disputed determinations or calculations. Such investment bank’s or accountant’s determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error. Absent bad faith by such Holder, the Company shall pay the expenses of such investment bank or accountant.

(iv) Record Holder. The Person or Persons entitled to receive the shares of Common Stock issuable upon a conversion of Series B Preferred Shares shall be treated for all purposes as the record holder or holders of such shares of Common Stock on the applicable Conversion Date, irrespective of the date such shares of Common Stock are credited to such Holder's account with DTC or the date of delivery of the certificates evidencing such shares of Common Stock, as the case may be.

(v) Company's Failure to Timely Convert.

(A) Cash Damages. If on or prior to the applicable Share Delivery Date the Company shall fail to credit a Holder's balance account with DTC (or issue and deliver a certificate to such Holder if applicable) for the number of shares of Common Stock to which such Holder is entitled upon such Holder's conversion of Series B Preferred Shares (a "**Conversion Failure**"), then in addition to all other available remedies which such holder may pursue hereunder and under the other Transaction Documents, including any indemnification provisions therein, the Company shall pay in cash to such Holder on the day after the Share Delivery Date, and on each thirtieth (30th) day thereafter (prorated for periods totaling less than thirty (30) days) during which such Conversion Failure remains uncured, an amount equal to one half percent (0.5%) of the product of (I) the number of shares of Common Stock not issued to such Holder on or prior to the applicable Share Delivery Date and to which such Holder is entitled as set forth in the applicable Conversion Notice and (II) the arithmetic average of the Weighted Average Prices of the Common Stock on each Trading Day during the period beginning on the applicable Conversion Date and ending on the applicable Share Delivery Date. In addition to the foregoing, if a Conversion Failure occurs or the Company fails to comply with its obligation to deliver shares of Common Stock as contemplated pursuant to clause (ii) below, and if on or after such Trading Day (but prior to the Company remedying any such failure) such Holder purchases (in an open market transaction or otherwise) shares of Common Stock relating to the applicable Conversion Failure (a "**Buy-In**"), then the Company shall, within three (3) Trading Days after such Holder's request and in such Holder's discretion, pay cash to such Holder in an amount equal to such Holder's total purchase price (including brokerage commissions and out-of-pocket expenses, if any) for the shares of Common Stock so purchased (such number of shares not to exceed the number of shares of Common Stock failed to be

delivered or credited, as applicable) (the “**Buy-In Price**”), at which point the Company’s obligation to deliver such certificate (and to issue such Common Stock) shall terminate. For the avoidance of doubt, to the extent that the Company makes a payment contemplated by the foregoing sentence, the applicable portion of the shares of Preferred Stock to which the Conversion Failure applied shall no longer be outstanding. Nothing herein shall limit a Holder’s right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to timely deliver certificates representing shares of Common Stock upon conversion of the Series B Preferred Shares as required pursuant to the terms hereof.

(B) Void Conversion Notice. If for any reason a Holder has not received all of the shares of Common Stock to which such Holder is entitled on the applicable Share Delivery Date with respect to a conversion of Series B Preferred Shares, then such Holder, upon written notice to the Company, with a copy to the Transfer Agent, may void its Conversion Notice with respect to, and retain or have returned, as the case may be, any Series B Preferred Shares that have not been converted pursuant to such Holder’s Conversion Notice; provided that the voiding of a Holder’s Conversion Notice shall not affect the Company’s obligations to make any payments which have accrued prior to the date of such notice pursuant to Section 5(c)(v)(A) or otherwise.

(vi) Pro Rata Conversion; Disputes. In the event the Company receives a Conversion Notice from more than one Holder for the same Conversion Date and the Company can convert some, but not all, of such Series B Preferred Shares, the Company shall convert from each Holder electing to have Series B Preferred Shares converted at such time a pro rata amount of such Holder’s Series B Preferred Shares submitted for conversion based on the number of Series B Preferred Shares submitted for conversion on such date by such Holder relative to the number of Series B Preferred Shares submitted for conversion on such date. In the event of a dispute as to the number of shares of Common Stock issuable to a Holder in connection with a conversion of Series B Preferred Shares, the Company shall issue to such Holder the number of shares of Common Stock not in dispute and resolve such dispute in accordance with Section 5(c)(iii).

(vii) Book-Entry. Notwithstanding anything to the contrary set forth herein, upon conversion of Series B Preferred Shares in accordance with the terms hereof, a Holder thereof shall not be required to physically surrender the certificate representing the Series B

Preferred Shares to the Company unless (A) the full or remaining number of Series B Preferred Shares represented by the certificate are being converted, in which case such Holder shall deliver such stock certificate to the Company as soon as practicable following such conversion or (B) a Holder has provided the Company with prior written notice (which notice may be included in a Conversion Notice) requesting reissuance of Series B Preferred Shares upon physical surrender of any Series B Preferred Shares. Each Holder and the Company shall maintain records showing the number of Series B Preferred Shares so converted and the dates of such conversions or shall use such other method, reasonably satisfactory to the Holders and the Company, so as not to require physical surrender of the certificate representing the Series B Preferred Shares upon each such conversion. In the event of any dispute or discrepancy, such records of the Company establishing the number of Series B Preferred Shares to which the record holder is entitled shall be controlling and determinative in the absence of manifest error. Notwithstanding the foregoing, if Series B Preferred Shares represented by a certificate are converted as aforesaid, a Holder may not transfer the certificate representing the Series B Preferred Shares unless such Holder first physically surrenders the certificate representing the Series B Preferred Shares to the Company, whereupon the Company will forthwith issue and deliver upon the order of such Holder a new certificate of like tenor, registered as such Holder may request, representing in the aggregate the remaining number of Series B Preferred Shares represented by such certificate. A Holder and any assignee, by acceptance of a certificate, acknowledge and agree that, by reason of the provisions of this paragraph, following conversion of any Series B Preferred Shares, the number of Series B Preferred Shares represented by such certificate may be less than the number of Series B Preferred Shares stated on the face thereof. Each certificate for Series B Preferred Shares shall bear the following legend:

ANY TRANSFEREE OF THIS CERTIFICATE SHOULD CAREFULLY REVIEW THE TERMS OF THE COMPANY'S CERTIFICATE OF DESIGNATIONS RELATING TO THE SERIES B PREFERRED SHARES REPRESENTED BY THIS CERTIFICATE, INCLUDING SECTION 5(c)(vii) THEREOF. THE NUMBER OF SERIES B PREFERRED SHARES REPRESENTED BY THIS CERTIFICATE MAY BE LESS THAN THE NUMBER OF SERIES B PREFERRED SHARES STATED ON THE FACE HEREOF PURSUANT TO SECTION 5(c)(vii) OF THE CERTIFICATE OF DESIGNATIONS RELATING TO THE SERIES B PREFERRED SHARES REPRESENTED BY THIS CERTIFICATE.

(d) Mandatory Conversion at the Company's Election.

(i) General. If at any time, or from time to time, from and after the Issuance Date (i) the Weighted Average Price of the Common Stock equals or exceeds 200% of the Conversion Price as of the Issuance Date (subject to appropriate adjustments for stock splits, stock dividends, stock combinations and other similar transactions after the Issuance Date, but not giving effect to any adjustment to the Conversion Price pursuant to Sections 5(g)(i) or 5(g)(v)) for ten (10) consecutive Trading Days occurring following the Issuance Date (a "**Mandatory Conversion Measuring Period**") (a "**Mandatory Conversion Price Condition**") and (ii) no Equity Conditions Failure has occurred during the Mandatory Conversion Measuring Period relating to the applicable Mandatory Conversion (as defined below), the Company shall have the right to require all, but not less than all, of the Holders to convert all of, or any portion of (provided, that any such portion, in the aggregate, is for at least 500 Series B Preferred Shares (as adjusted for any preferred stock splits, preferred stock dividends, preferred stock combinations and other similar transactions)) the Conversion Amount then remaining under the Series B Preferred Shares, as designated in the Mandatory Conversion Notice relating to the applicable Mandatory Conversion on the applicable Mandatory Conversion Date (each as defined below) into fully paid, validly issued and nonassessable shares of Common Stock in accordance with Section 5(c) hereof at the Conversion Rate as of the applicable Mandatory Conversion Date (a "**Mandatory Conversion**"). The Company may exercise its right to require conversion under this Section 5(d) by delivering within not more than one (1) Trading Day following the end of such Mandatory Conversion Measuring Period a written notice thereof by electronic mail to all Holders and the Transfer Agent (a "**Mandatory Conversion Notice**" and the date all Holders received (or, in accordance with Section 9(f) of the Securities Purchase Agreement, are deemed to have received) such notice is referred to as a "**Mandatory Conversion Notice Date**"). Each Mandatory Conversion Notice shall be irrevocable. Each Mandatory Conversion Notice shall (i) state (a) the Trading Day on which the applicable Mandatory Conversion shall occur, which Trading Day shall be the earlier of (A) the number of Trading Days comprising the Standard Settlement Period and (B) the third (3rd) Trading Day, in each case, following the applicable Mandatory Conversion Notice Date (a "**Mandatory Conversion Date**"), (b) the aggregate Conversion Amount of the Series B Preferred Shares which the Company has elected to be subject to such Mandatory Conversion from such Holder

and all other Holders pursuant to this Section 5(d) and (c) the number of shares of Common Stock to be issued to such Holder on the applicable Mandatory Conversion Date and (ii) certify that the Mandatory Conversion Price Condition relating to the applicable Mandatory Conversion has been satisfied and that there has been no Equity Conditions Failure on any day during the period beginning on the first day of the applicable Mandatory Conversion Measuring Period prior to the applicable Mandatory Conversion Notice Date through the applicable Mandatory Conversion Notice Date. If the Company confirmed that there was no such Equity Conditions Failure and that the Mandatory Conversion Price Condition relating to the applicable Mandatory Conversion was satisfied as of the applicable Mandatory Conversion Notice Date but an Equity Conditions Failure occurs or the Mandatory Conversion Price Condition fails to be satisfied between the applicable Mandatory Conversion Notice Date and any time through the applicable Mandatory Conversion Date (a “**Mandatory Conversion Interim Period**”), the Company shall provide each Holder a subsequent written notice to that effect. If there is an Equity Conditions Failure during the applicable Mandatory Conversion Interim Period (which is not waived in writing by such Holder; provided that the Equity Condition set forth in clause (iv) of the definition of “Equity Conditions” shall not be waivable by a Holder; provided, further, that if the Equity Conditions Failure is due solely to the failure of the Equity Condition set forth in clause (iv) of the definition of “Equity Conditions” by virtue of Section 5(e)(i), such Equity Conditions Failure shall be dealt with in accordance with the provisions set forth in this Section 5(d)(i) or the Mandatory Conversion Price Condition relating to the applicable Mandatory Conversion fails to be satisfied during the applicable Mandatory Conversion Interim Period, then such Mandatory Conversion shall be null and void with respect to all or any part designated by such Holder of the unconverted Conversion Amount subject to the applicable Mandatory Conversion and such Holder shall be entitled to all the rights of a holder of Series B Preferred Shares with respect to such Conversion Amount; provided, however, that if a Holder waives in writing an Equity Conditions Failure during the applicable Mandatory Conversion Interim Period or failure to satisfy the Mandatory Conversion Price Condition relating to the applicable Mandatory Conversion during the applicable Mandatory Conversion Interim Period, then the Company shall be required to proceed with the applicable Mandatory Conversion with respect to such Holder. If a Mandatory Conversion cannot be consummated in full due to the limitations set forth in Section 5(e)(i), then (i) on the applicable Mandatory Conversion Date, only that portion of the applicable Mandatory Conversion that complies with the limitations set forth in Section 5(e)(i) shall be deemed to occur, and (ii) (1) any portion of

the applicable Mandatory Conversion that cannot occur due to such limitations will be tolled until consummating such portion of the applicable Mandatory Conversion complies with such limitations, (2) such Holder must provide prompt written notice to the Company upon disposition of any securities of the Company that would permit further consummation of any portion of the applicable Mandatory Conversion not yet consummated, and (3) on the third (3rd) Trading Day following such notice from such Holder, the newly permitted portion of the applicable Mandatory Conversion not yet consummated shall be consummated on the same terms, including, without limitation, the Mandatory Conversion Price, without any adjustment (other than for any stock dividend, stock split, stock combination, reclassification or other similar transaction during such period), as if such subsequent consummation occurred on the applicable Mandatory Conversion Date. From the date of a Mandatory Conversion Notice until the complete consummation of the related Mandatory Conversion contemplated therein (unless earlier voided in accordance with this Section 5(d)(i)), such Holder shall not take any action, or permit any action to be taken, the effect of which would increase the percentage of the number of shares of Common Stock beneficially owned by such Holder and its other Attribution Parties, other than the receipt of Common Stock from such Mandatory Conversion or from a conversion effected pursuant to Sections 5(c) and/or 5(g)(v). Notwithstanding anything to the contrary in this Section 5(d), until the applicable Mandatory Conversion has occurred, the Conversion Amount subject to the Mandatory Conversion may be converted, in whole or in part, by a Holder into shares of Common Stock pursuant to Sections 5(c) and/or 5(g)(v). All Conversion Amounts converted by a Holder after a Mandatory Conversion Notice Date shall reduce the Conversion Amount of the Series B Preferred Shares required to be converted on the related Mandatory Conversion Date, unless such Holder otherwise indicates in a Conversion Notice. In the event of a partial Mandatory Conversion of such Holder's Series B Preferred Shares pursuant hereto, the Converted Amount so converted shall be deducted in reverse order starting from the final Installment Amount to be paid hereunder to such Holder on the final Installment Date, unless such Holder otherwise indicates and allocates among any Installment Dates hereunder in a written notice to the Company.

(ii) Pro Rata Conversion Requirement. If the Company elects to cause a Mandatory Conversion pursuant to Section 5(d)(i), then it must simultaneously take the same action in the same proportion with respect to all Series B Preferred Shares. If the Company elects a Mandatory Conversion of the Series B Preferred Shares pursuant to Section 5(d)(i) with respect to less than all of the Series B Preferred Shares then outstanding, then the Company shall

require conversion of a number of Series B Preferred Shares from each of Holder equal to the product of (i) the aggregate number of Series B Preferred Shares which the Company has elected to cause to be converted pursuant to Section 5(d)(i), multiplied by (ii) the fraction, the numerator of which is the sum of the aggregate number of Series B Preferred Shares then held by such Holder and the denominator of which is the sum of the aggregate number of Series B Preferred Shares issued by the Company on the Issuance Date (such fraction with respect to each Holder is referred to as its “**Mandatory Conversion Allocation Percentage**,” and such amount with respect to each Holder is referred to as its “**Pro Rata Mandatory Conversion Amount**”). In the event that an initial Holder shall sell or otherwise transfer any of such Holder’s Series B Preferred Shares, such transferee shall be allocated a pro rata portion of such Holder’s Mandatory Conversion Allocation Percentage and Pro Rata Mandatory Conversion Amount.

(e) Limitation on Conversions.

(i) Beneficial Ownership. Notwithstanding anything to the contrary contained herein, the Company shall not affect the conversion of any portion of Series B Preferred Shares, and no Electing Holder shall have the right to convert any portion of Series B Preferred Shares pursuant to the terms and conditions of this Certificate of Designations and any such conversion shall be null and void and treated as if never made, to the extent that after giving effect to such conversion, such Electing Holder together with the other Attribution Parties collectively would beneficially own in excess of 9.99% (the “**9.99% Maximum Percentage**”) of the number of shares of Common Stock outstanding immediately after giving effect to such conversion. Notwithstanding anything to the contrary contained herein, at any time prior to the time the Company obtains Stockholder Approval, the Company shall not affect the conversion of any portion of Series B Preferred Shares, and no Non-Electing Holder shall have the right to convert any portion of Series B Preferred Shares pursuant to the terms and conditions of this Certificate of Designations and any such conversion shall be null and void and treated as if never made, to the extent that after giving effect to such conversion, such Non-Electing Holder together with the other Attribution Parties collectively would beneficially own in excess of 19.99% (the “**19.99% Maximum Percentage**” and together with the 9.99% Maximum Percentage, the “**Maximum Percentage**”) of the number of shares of Common Stock outstanding immediately after giving effect to such conversion. For purposes of the foregoing sentences, the aggregate number of shares of Common Stock beneficially owned by a Holder and its other Attribution Parties shall include the number of shares of Common Stock held by such Holder and all of its other

Attribution Parties plus the number of shares of Common Stock issuable upon conversion of the Series B Preferred Shares with respect to which the determination of such sentence is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (A) conversion of the remaining, nonconverted Series B Preferred Shares beneficially owned by such Holder or any of its other Attribution Parties and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company (including, without limitation, any convertible notes or convertible preferred stock or warrants, including the Warrants) beneficially owned by such Holder or any of its other Attribution Party subject to a limitation on conversion or exercise analogous to the limitation contained in this Section 5(e)(i). For purposes of this Section 5(e)(i), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”). For purposes of determining the number of outstanding shares of Common Stock a Holder may acquire upon the conversion of Series B Preferred Shares without exceeding the applicable Maximum Percentage, such Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public filing with the SEC, as the case may be, (y) a more recent public announcement by the Company or (z) any other written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding (the “**Reported Outstanding Share Number**”). If the Company receives a Conversion Notice from a Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify such Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Conversion Notice would otherwise cause such Holder’s beneficial ownership, as determined pursuant to this Section 5(e)(i), to exceed the applicable Maximum Percentage, such Holder must notify the Company of a reduced number of shares of Common Stock to be purchased pursuant to such Conversion Notice. For any reason at any time, upon the written or oral request of any Holder, the Company shall within one (1) Trading Day confirm orally and in writing or by electronic mail to such Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including the Series B Preferred Shares, by such Holder and any of its other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of shares

of Common Stock to a Holder upon exercise of such Holder's Series B Preferred Shares results in such Holder and its other Attribution Parties being deemed to beneficially own, in the aggregate, more than the applicable Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the Exchange Act), the number of shares so issued by which such Holder's and its other Attribution Parties' aggregate beneficial ownership exceeds the applicable Maximum Percentage (the "**Excess Shares**") shall be deemed null and void and shall be cancelled ab initio, and such Holder shall not have the power to vote or to transfer the Excess Shares. For purposes of clarity, the shares of Common Stock underlying the Series B Preferred Shares in excess of the applicable Maximum Percentage shall not be deemed to be beneficially owned by a Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the Exchange Act. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 5(e)(i) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 5(e)(i) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of Series B Preferred Shares. If as of the Maturity Date, any conversion of any portion of Series B Preferred Shares cannot be consummated in full due to the limitations set forth in this Section 5(e)(i), then (i) on the Maturity Date, that portion of such conversion that complies with the limitations set forth in this Section 5(e)(i) shall be deemed to occur, (ii) (1) any portion of such conversion that cannot occur due to such limitations will be tolled until consummating such portion of such conversion complies with such limitations, (2) such Holder must provide prompt written notice to the Company upon disposition of any securities of the Company that would permit further consummation of any portion of such conversion not yet consummated, and (3) on the third (3rd) Trading Day following such notice from such Holder, the newly permitted portion of such conversion not yet consummated shall be consummated on the same terms, including, without limitation, the Conversion Price, without any adjustment (other than for any stock dividend, stock split, stock combination, reclassification or other similar transaction during such period), as if such subsequent consummation occurred on the originally contemplated conversion date and (iii) until all of such conversion is consummated in full, such Holder shall not take any action, or permit any action to be taken, the effect of which would increase the percentage of the number of shares of Common Stock beneficially owned by such Holder and its other Attribution Parties, other than receipt of Common Stock from such conversion.

(ii) Principal Market Regulation. The Company shall not be obligated to issue any shares of Common Stock pursuant to the terms of this Certificate of Designations, and the Holders shall not have the right to receive any shares of Common Stock pursuant to the terms of this Certificate of Designations, to the extent the issuance of such shares of Common Stock, combined with all shares of Common Stock previously issued pursuant to the Warrants, would exceed 3,084,581 shares of Common Stock (as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the Subscription Date) (the “**Exchange Cap**”), except that such limitation shall not apply in the event that the Company obtains the approval of its stockholders as required by the applicable rules of the Principal Market for issuances of Common Stock in excess of such amount. Until such approval is obtained, no Holder shall be issued in the aggregate, pursuant to the terms of this Certificate of Designations, shares of Common Stock in an amount greater than the product of the Exchange Cap multiplied by a fraction, the numerator of which is the number of Series B Preferred Shares issued to such Holder pursuant to the Securities Purchase Agreement on the Issuance Date and the denominator of which is the aggregate number of all Series B Preferred Shares issued to the Holders pursuant to the Securities Purchase Agreement on the Issuance Date (with respect to each such Holder, the “**Exchange Cap Allocation**”). In the event that any Holder shall sell or otherwise transfer any of such Holder’s Series B Preferred Shares, the transferee shall be allocated a pro rata portion of such Holder’s Exchange Cap Allocation, and the restrictions of the prior sentence shall apply to such transferee with respect to the portion of the Exchange Cap Allocation allocated to such transferee. In the event that any Holder shall convert all of such Holder’s Series B Preferred Shares into a number of shares of Common Stock which, in the aggregate, is less than such Holder’s Exchange Cap Allocation, then the difference between such Holder’s Exchange Cap Allocation and the number of shares of Common Stock actually issued to such Holder shall be allocated to the respective Exchange Cap Allocations of the remaining Holders on a pro rata basis in proportion to the shares of Common Stock underlying the Series B Preferred Shares then held by each such Holder. In the event that the Company is prohibited from issuing any shares of Common Stock for which a Conversion Notice has been received after October 31, 2017 as a result of the operation

of this Section 5(e)(ii), the Company shall pay to such Holder within three (3) Trading Days of the applicable attempted conversion, cash by wire transfer of immediately available funds pursuant to written wire instructions delivered by such Holder to the Company in an amount per share of Common Stock that would have been issuable upon such conversion if this Section 5(e)(ii) were not in effect: (x) in the event the Holder delivers a Conversion Notice to the Company before 4:00:00 p.m., New York time (or such other time as the Principal Market or other applicable Eligible Market publicly announces is the official close of trading) on any given Trading Day, the applicable Exchange Cap Weighted Average Price of the Common Stock for the applicable Exchange Cap Period on the date of such Holder's attempted conversion and (y) in the event the Holder delivers a Conversion Notice to the Company on or after 4:00:00 p.m., New York time (or such other time as the Principal Market or other applicable Eligible Market publicly announces is the official close of trading) on any given Trading Day, the Weighted Average Price of the Common Stock on the date of such Holder's attempted conversion.

(f) Transfer Taxes. The issuance of certificates for shares of the Common Stock on conversion of the Series B Preferred Shares shall be made without charge to the Holders for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates.

(g) Adjustments to Conversion Price. The Conversion Price will be subject to adjustment from time to time as provided in this Section 5(g).

(i) Adjustment of Conversion Price upon Issuance of Shares of Common Stock. If and whenever on or after the Subscription Date, the Company issues or sells, or in accordance with this Section 5(g)(i) is deemed to have issued or sold, any shares of Common Stock (including the issuance or sale of shares of Common Stock owned or held by or for the account of the Company, but excluding shares of Common Stock deemed to have been issued or sold in connection with any Excluded Securities) for a consideration per share (the "**New Issuance Price**") less than a price (the "**Applicable Price**") equal to the Conversion Price in effect immediately prior to such issuance or sale or deemed issuance or sale (the foregoing, a "**Dilutive Issuance**"), then immediately after such Dilutive Issuance, the Conversion Price then in effect shall be reduced to an amount equal to the New Issuance Price. For purposes of determining the adjusted Conversion Price under this Section 5(g)(i), the following shall be applicable:

(A) Issuance of Options. If the Company in any manner grants or sells any Options and the lowest price per share for which

one share of Common Stock is issuable upon the exercise of any such Option or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the granting or sale of such Option for such price per share. For purposes of this Section 5(g)(i)(A), the “lowest price per share for which one share of Common Stock is issuable upon the exercise of any such Option or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option” shall be equal to the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to any one share of Common Stock upon the granting or sale of the Option, upon exercise of the Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option less any consideration paid or payable by the Company with respect to such one share of Common Stock upon the granting or sale of such Option, upon exercise of such Option and upon conversion exercise or exchange of any Convertible Security issuable upon exercise of such Option. No further adjustment of the Conversion Price shall be made upon the actual issuance of such shares of Common Stock or of such Convertible Securities upon the exercise of such Options or upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities.

(B) Issuance of Convertible Securities. If the Company in any manner issues or sells any Convertible Securities and the lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the issuance or sale of such Convertible Securities for such price per share. For the purposes of this Section 5(g)(i)(B), the “lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange “ shall be equal to the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to any one share of Common Stock upon the issuance or sale of the Convertible Security and upon conversion, exercise or exchange of such Convertible Security less any consideration paid or payable by the Company with respect to such one share of Common Stock upon the issuance or sale of such Convertible Security and upon conversion, exercise or exchange of such Convertible Security. No further adjustment of the Conversion Price shall be made upon the actual issuance of such shares of

Common Stock upon conversion, exercise or exchange of such Convertible Securities, and if any such issue or sale of such Convertible Securities is made upon exercise of any Options for which adjustment of the Conversion Price had been or are to be made pursuant to other provisions of this Section 5(g)(i), no further adjustment of the Conversion Price shall be made by reason of such issue or sale.

(C) Change in Option Price or Rate of Conversion. If the purchase or exercise price provided for in any Options, the additional consideration, if any, payable upon the issue, conversion, exercise or exchange of any Convertible Securities, or the rate at which any Convertible Securities are convertible into or exercisable or exchangeable for shares Common Stock increases or decreases at any time, the Conversion Price in effect at the time of such increase or decrease shall be adjusted to the Conversion Price which would have been in effect at such time had such Options or Convertible Securities provided for such increased or decreased purchase price, additional consideration or increased or decreased conversion rate, as the case may be, at the time initially granted, issued or sold. For purposes of this Section 5(g)(i)(C), if the terms of any Option or Convertible Security that was outstanding as of the Subscription Date are increased or decreased in the manner described in the immediately preceding sentence, then such Option or Convertible Security and the shares of Common Stock deemed issuable upon exercise, conversion or exchange thereof shall be deemed to have been issued as of the date of such increase or decrease. No adjustment pursuant to this Section 5(g)(i) shall be made if such adjustment would result in an increase of the Conversion Price then in effect.

(D) Calculation of Consideration Received. In case any Option is issued in connection with the issue or sale of other securities of the Company, together comprising one integrated transaction, (x) the Options will be deemed to have been issued for the Option Value of such Options and (y) the other securities issued or sold in such integrated transaction shall be deemed to have been issued or sold for the difference of (I) the aggregate consideration received by the Company less any consideration paid or payable by the Company pursuant to the terms of such other securities of the Company, less (II) the Option Value of such Options. If any shares of Common Stock, Options or Convertible Securities are issued or sold or deemed to have been issued or sold for cash, the consideration received or receivable therefor will be deemed to be the net amount received by the Company therefor. If any Common Stock, Options or Convertible Securities are issued or sold for a consideration other than cash, the amount of such

consideration received by the Company will be the fair value of such consideration, except where such consideration consists of publicly traded securities, in which case the amount of consideration received by the Company will be the Closing Sale Price of such publicly traded securities on the date of receipt of such publicly traded securities. If any shares of Common Stock, Options or Convertible Securities are issued to the owners of the non-surviving entity in connection with any merger in which the Company is the surviving entity, the amount of consideration therefor will be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such shares of Common Stock, Options or Convertible Securities, as the case may be. The fair value of any consideration other than cash or publicly traded securities will be determined jointly by the Company and the Required Holders. If such parties are unable to reach agreement within ten (10) days after the occurrence of an event requiring valuation (the "**Valuation Event**"), the fair value of such consideration will be determined within five (5) Business Days after the tenth (10th) day following the Valuation Event by an independent, reputable appraiser selected by the Company with the consent of the Required Holders (such consent not to be unreasonably conditioned, withheld or delayed). The determination of such appraiser shall be final and binding upon all parties absent manifest error. Absent bad faith by the Required Holders, the fees and expenses of such appraiser shall be borne by the Company.

(E) Record Date. If the Company takes a record of the holders of shares of Common Stock for the purpose of entitling them (I) to receive a dividend or other distribution payable in shares of Common Stock, Options or in Convertible Securities or (II) to subscribe for or purchase shares of Common Stock, Options or Convertible Securities, then such record date will be deemed to be the date of the issue or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase, as the case may be.

(F) No Readjustments. For the avoidance of doubt, in the event the Conversion Price has been adjusted pursuant to this Section 5(g)(i) and the Dilutive Issuance that triggered such adjustment does not occur, is not consummated, is unwound or is cancelled after the facts for any reason whatsoever, in no event shall the Conversion Price be readjusted to the Conversion Price that would have been in effect if such Dilutive Issuance had not occurred or been consummated.

(ii) Voluntary Adjustment By Company. The Company may at any time, with the prior written consent of the Required Holders, reduce the then current Conversion Price to any amount and for any period of time deemed appropriate by the Board.

(iii) Adjustment of Conversion Price upon Subdivision or Combination of Common Stock. If the Company at any time on or after the Subscription Date subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Conversion Price in effect immediately prior to such subdivision will be proportionately reduced. If the Company at any time on or after the Subscription Date combines (by combination, reverse stock split or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Conversion Price in effect immediately prior to such combination will be proportionately increased. Any adjustment under this Section 5(g)(iii) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(iv) Other Events. If any event occurs of the type contemplated by the provisions of this Section 5(g) but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, phantom stock rights or other rights with equity features), then the Board will make an appropriate adjustment in the Conversion Price, as mutually determined by the Board and the Required Holders, so as to protect the rights of the Holders; provided that no such adjustment pursuant to this Section 5(g)(iv) will increase the Conversion Price as otherwise determined pursuant to this Section 5(g).

(v) Triggering Event Conversion Price. At any time from and after the occurrence of a Triggering Event and continuing after such occurrence until the date that is ten (10) Trading Days immediately following the date such Triggering Event is cured or waived in writing by a Holder, such Holder may at any time and from time to time, at such Holder's option, deliver one or more Conversion Notices to the Company indicating such Holder's election to convert (each, a "**Triggering Event Conversion**", and the date of such Triggering Event Conversion, each, a "**Triggering Event Conversion Date**") all, or any part of, the Conversion Amount then outstanding hereunder (such portion of the Conversion Amount subject to such Triggering Event Conversion, the "**Triggering Event Conversion Amount**") into shares of Common Stock at the applicable Triggering Event Conversion Price in lieu of the Conversion Price then in effect. On any Triggering Event Conversion Date, the Holder may voluntarily convert any Triggering Event

Conversion Amount pursuant to Section 5(c) (with “Triggering Event Conversion Price” replacing “Conversion Price” for all purposes hereunder with respect to such Triggering Event Conversion) by designating in the Conversion Notice delivered pursuant to this Section 5(g)(v) that the Holder is electing to use the Triggering Event Conversion Price for such conversion according to this Section 5(g)(v) by checking the box “Triggering Event Conversion Price” on the applicable Conversion Notice. The Company shall be required to honor such Triggering Event Conversions by delivering shares of Common Stock on or prior to the applicable Share Delivery Date pursuant to the terms and conditions set forth in Section 5(c), but based on a Conversion Price equal to the Triggering Event Conversion Price. In the event that the Holder elects to convert pursuant to this Section 5(g)(v), the Conversion Amount so converted shall be deducted from the final Installment Amounts to be paid hereunder on the final Installment Date, unless the Holder otherwise indicates and allocates among any Installment Dates hereunder in the applicable Conversion Notice(s).

(h) Notices.

(i) Promptly upon any adjustment of the Conversion Price pursuant to Section 5(g), the Company will give written notice thereof to each Holder, setting forth in reasonable detail, and certifying, the calculation of such adjustment. In the case of a dispute as to the determination of such adjustment, then such dispute shall be resolved in accordance with the procedures set forth in Section 5(c)(iii).

(ii) The Company will give written notice to each Holder at least ten (10) Business Days prior to the date on which the Company closes its books or takes a record (I) with respect to any dividend or distribution upon the Common Stock, (II) with respect to any pro rata subscription offer to holders of Common Stock or (III) for determining rights to vote with respect to any Fundamental Transaction or Liquidation Event, provided that such information shall be made known to the public prior to or in conjunction with such notice being provided to such Holder.

(iii) The Company will also give written notice to each Holder at least ten (10) Business Days prior to the date on which any Fundamental Transaction or Liquidation Event will take place, provided that such information shall be made known to the public prior to or in conjunction with such notice being provided to such Holder.

(i) **Pre-Delivery of Common Stock.** Notwithstanding anything to the contrary herein, but subject to the limitations contained in Section 5(e), with the prior written consent of a Holder, the Company may at any time or from time to time deliver shares of Common Stock to such Holder and such shares of Common Stock (as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the delivery thereof to such Holder) shall be used to offset any requirement thereafter to deliver shares of Common Stock hereunder to such Holder.

(6) Redemption at Option of Holders.

(a) **Triggering Event.** A “**Triggering Event**” shall be deemed to have occurred at such time as any of the following events:

(i) the shares of Common Stock issued and issuable with respect to the Series B Preferred Shares shall not be: (x) issued or issuable without restrictive legends and eligible for sale without restriction or limitation pursuant to (A) Rule 144 of the Securities Act and without the requirement to be in compliance with Rule 144(c)(1) (or any successor thereto) or (B) Rule 3(a)(9) of the Securities Act and without the need for registration under any applicable federal or state securities laws and (y) eligible for sale or resale without restriction or limitation pursuant to an effective registration statement;

(ii) (A) the suspension of the Common Stock from trading on an Eligible Market for a period of five (5) consecutive Trading Days or for more than an aggregate of twenty (20) Trading Days in any 365-day period or (B) the failure of the Common Stock to be listed on an Eligible Market;

(iii) the Company’s (A) failure to cure a Conversion Failure within three (3) Trading Days after the applicable Share Delivery Date with respect to a conversion of Series B Preferred Shares or (B) notice, written or oral, to any Holder, including by way of public announcement, or through any of its agents, at any time, of its intention not to comply, as required, with a request for conversion of any Series B Preferred Shares into shares of Common Stock that is validly tendered in accordance with the provisions of this Certificate of Designations;

(iv) at any time following the tenth (10th) consecutive Business Day that a Holder’s Authorized Share Allocation (as defined in Section 10(a)) is less than 150% of the sum of (A) the number of shares of Common Stock that such Holder would be entitled to receive upon a conversion of the full Conversion Amount of the Series B Preferred Shares (without regard to any limitations on conversion set forth in Section 5(e) or otherwise) and (B) the number of shares of Common Stock that such Holder would be entitled to receive upon exercise in full of such Holder’s Warrants (without regard to any limitations on exercise set forth in the Warrants);

(v) the Company's failure to pay to such Holder any amounts when and as due pursuant to this Certificate of Designations or any other Transaction Document, only if such breach remains uncured for a period of at least three (3) consecutive Business Days;

(vi) the Company or any of its Subsidiaries, pursuant to or within the meaning of Title 11, U.S. Code, or any similar federal, foreign or state law for the relief of debtors (collectively, "**Bankruptcy Law**"), (A) commences a voluntary case, (B) consents to the entry of an order for relief against it in an involuntary case, (C) consents to the appointment of a receiver, trustee, assignee, liquidator or similar official (a "**Custodian**"), (D) makes a general assignment for the benefit of its creditors or (E) admits in writing that it is generally unable to pay its debts as they become due;

(vii) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that (A) is for relief against the Company or any of its Subsidiaries in an involuntary case, (B) appoints a Custodian of the Company or any of its Subsidiaries or (C) orders the liquidation of the Company or any of its Subsidiaries;

(viii) a final judgment or judgments for the payment of money aggregating in excess of \$500,000 are rendered against the Company or any of its Subsidiaries and which judgments are not, within thirty (30) days after the entry thereof, bonded, discharged or stayed pending appeal, or are not discharged within thirty (30) days after the expiration of such stay; provided, however, that any judgment which is covered by insurance or an indemnity from a credit worthy party shall not be included in calculating the \$500,000 amount set forth above so long as the Company provides the Holders with a written statement from such insurer or indemnity provider (which written statement shall be reasonably satisfactory to the Required Holders) to the effect that such judgment is covered by insurance or an indemnity and the Company will receive the proceeds of such insurance or indemnity within thirty (30) days of the issuance of such judgment;

(ix) other than as specifically set forth in another clause of this Section 6(a), the Company breaches (A) any representation, warranty, covenant or other term or condition of any Transaction Document, if such breach would reasonably be expected to have a Material Adverse Effect (as defined in the Securities Purchase Agreement) or (B) any material representation, warranty, covenant or other term of any Transaction Document, except, in each case, in the case of a breach of a covenant or other term which is curable, only if such breach remains uncured for a period of at least five (5) Business Days;

(x) any breach or failure in any respect to comply with either Sections 13 or 14 of this Certificate of Designations only if such breach remains uncured for a period of at least three (3) consecutive Business Days;

(xi) any material damage to, or loss, theft or destruction of, any material amount of property of the Company, whether or not insured, or any strike, lockout, labor dispute, embargo, condemnation, act of God or public enemy, or other casualty which causes, for more than fifteen (15) consecutive days, the cessation or substantial curtailment of revenue producing activities at any facility of the Company or any Subsidiary, if any such event or circumstance would reasonably be expected to have a Material Adverse Effect (as defined in the Securities Purchase Agreement);

(xii) a false or inaccurate certification (including a false or inaccurate deemed certification) by the Company that the Equity Conditions are satisfied or that there has been no Equity Conditions Failure or as to whether any Triggering Event has occurred; or

(xiii) the Company's failure for any reason after the Issuance Date to satisfy the current public information requirement under Rule 144(c).

(b) Redemption Option Upon Triggering Event. In addition to all other rights of the Holders contained herein, at any time after the earlier of a Holder's receipt of a Notice of Triggering Event (as defined in Section 6(c)) and a Holder becoming aware of a Triggering Event, such Holder shall have the right, at such Holder's option, to require the Company to redeem (a "**Triggering Event Redemption**") all or a portion of such Holder's Series B Preferred Shares at a price per Series B Preferred Share equal to the greater of (A) 125% of the Conversion Amount and (B) the product of (1) the Conversion Amount being redeemed and (2) the quotient determined by dividing (I) the greatest Closing Sale Price of the Common Stock during the period beginning on the date immediately preceding such Triggering Event and ending on the date such Holder delivers the Notice of Redemption at Option of Holder (as defined below), by (II) the lowest Conversion Price in effect during such period (the "**Triggering Event Redemption Price**").

(c) Mechanics of Triggering Event Redemption at Option of Buyer. Within one (1) Business Day after the occurrence of a Triggering Event, the Company shall deliver written notice thereof via electronic mail and overnight courier ("**Notice of Triggering Event**") to each Holder. At any time after the

earlier of a Holder's receipt of a Notice of Triggering Event and such Holder becoming aware of a Triggering Event, any holder of Series B Preferred Shares then outstanding may require the Company to redeem up to all of such Holder's Series B Preferred Shares by delivering written notice thereof via electronic mail and overnight courier ("**Notice of Redemption at Option of Holder**") to the Company, which Notice of Redemption at Option of Holder shall indicate the number of Series B Preferred Shares that such Holder is electing to redeem.

(d) Payment of Triggering Event Redemption Price. Upon the Company's receipt of a Notice(s) of Redemption at Option of Holder from any Holder, the Company shall within one (1) Business Day of such receipt notify each other Holder by electronic mail of the Company's receipt of such notice(s). The Company shall deliver to a Holder an amount in cash equal to the applicable Triggering Event Redemption Price by wire transfer of immediately available funds on the third (3rd) Business Day after such Holder's delivery of a Notice of Redemption at Option of Holder to the Company, provided that the Company shall deliver to all Holders that deliver a Notice of Redemption at Option of Holder prior to the third (3rd) Business Day after the Company's receipt of the first Notice of Redemption at Option of Holder on the third (3rd) Business Day after the first Holder's delivery of a Notice of Redemption at Option of Holder to the Company (a "**Triggering Event Redemption Date**"). To the extent redemptions required by this Section 6 are deemed or determined by a court of competent jurisdiction to be prepayments of the Series B Preferred Shares by the Company, such redemptions shall be deemed to be voluntary prepayments. If the Company is unable to redeem all of the Series B Preferred Shares submitted for redemption, the Company shall (i) redeem a pro rata amount from each Holder based on the number of Series B Preferred Shares submitted for redemption by such Holder relative to the total number of Series B Preferred Shares submitted for redemption by all Holders and (ii) in addition to any remedy such Holder may have under this Certificate of Designations, pay to each Holder interest at the rate of one and one-half percent (1.5%) per month (prorated for partial months) in respect of each unredeemed Series B Preferred Share until paid in full. In the event less than all of a Holder's remaining Series B Preferred Shares are redeemed pursuant hereto, the Conversion Amount so redeemed shall be deducted from the Installment Amounts applying such reduction to the Installment Dates in reverse order first to the last Installment Date on which Installment Amounts are then scheduled to be paid to such Holder, unless such Holder shall otherwise specify in the Notice of Redemption at Option of Holder or other applicable notice. The Holders and Company agree that in the event of the Company's redemption of any Series B Preferred Shares under this Section 6, the Holders' damages would be uncertain and difficult to estimate because of the parties' inability to predict future interest rates and the uncertainty of the availability of a suitable substitute investment opportunity for the Holders. Accordingly, any redemption premium due under this Section 6 is intended by the parties to be, and shall be deemed, a reasonable estimate of the Holders' actual loss of its investment opportunity and not as a penalty.

(e) Disputes; Miscellaneous. In the event of a dispute as to the determination of the arithmetic calculation of any Triggering Event Redemption Price, such dispute shall be resolved pursuant to Section 5(c)(iii) above with the term “Redemption Price” being substituted for the term “Conversion Rate”. A Holder’s delivery of a Void Optional Redemption Notice (as defined in Section 7(c)) and exercise of its rights following such notice shall not affect the Company’s obligations to make any payments which have accrued prior to the date of such notice. In the event of a redemption pursuant to this Certificate of Designations of less than all of the Series B Preferred Shares represented by a particular Series B Preferred Stock Certificate, the Company shall promptly cause to be issued and delivered to the Holder of such Series B Preferred Shares a Series B Preferred Stock Certificate representing the remaining Series B Preferred Shares which have not been redeemed, if necessary.

(7) Redemption by the Company.

(a) General. Other than as specifically permitted by this Certificate of Designations, the Company may not redeem any of the outstanding Series B Preferred Shares.

(b) Redemption by Other Holders. Upon the Company’s receipt of notice from any Holder for redemption or repayment as a result of an event or occurrence substantially similar to the events or occurrences described in Section 6(b) or Section 8(a) (each, an “**Other Redemption Notice**”), the Company shall immediately, but no later than one (1) Business Day of its receipt thereof, forward to each Holder by electronic mail a copy of such notice. If the Company receives a Redemption Notice and one or more Other Redemption Notices, during the seven (7) Business Day period beginning on and including the date which is three (3) Business Days prior to the Company’s receipt of such Holder’s Redemption Notice and ending on and including the date which is three (3) Business Days after the Company’s receipt of a Holder’s Redemption Notice and the Company is unable to redeem all Stated Value, dividends, Late Charges and other amounts designated in such Redemption Notice and such Other Redemption Notices received during such seven (7) Business Day period, then the Company shall redeem a pro rata amount from each Holder based on the Stated Value of the Series B Preferred Shares submitted for redemption pursuant to such Redemption Notice and such Other Redemption Notices received by the Company during such seven (7) Business Day period.

(c) Insufficient Assets. If upon a Redemption Date, the assets of the Company are insufficient to pay the applicable Redemption Price for each Series B Preferred Share to be redeemed, the Company shall (i) take all appropriate action reasonably within its means to maximize the assets available for paying the applicable Redemption Price, (ii) redeem out of all such assets available therefor on the applicable Redemption Date the maximum possible number of Series B Preferred Shares that it can redeem on such date, pro rata

among the Holders to be redeemed in proportion to the aggregate number of Series B Preferred Shares then held by each such Holder on the applicable Redemption Date and (iii) following the applicable Redemption Date, at any time and from time to time when additional assets of the Company become available to redeem the remaining Series B Preferred Shares, the Company shall use such assets, at the end of the then current fiscal quarter, to redeem the balance of such Series B Preferred Shares, or such portion thereof for which assets are then available, on the basis set forth above at the applicable Redemption Price, and such assets will not be used prior to the end of such fiscal quarter for any other purpose. The Company shall pay to each Holder the applicable Redemption Price for each Series B Preferred Share without regard to the legal availability of funds unless expressly prohibited by applicable law or unless the payment of such Redemption Price would reasonably be expected to result in personal liability to the directors of the Company.

(d) Void Redemption. In the event that the Company does not pay a Redemption Price within the applicable time period, at any time thereafter and until the Company pays such unpaid applicable Redemption Price in full, a Holder shall have the option to, in lieu of redemption, require the Company to promptly return to such Holder any or all of the Series B Preferred Shares that were submitted for redemption by such Holder and for which the applicable Redemption Price has not been paid, by sending written notice thereof to the Company via electronic mail (the "**Void Optional Redemption Notice**"). Upon the Company's receipt of such Void Optional Redemption Notice, (i) the Redemption Notice of Holder shall be null and void with respect to those Series B Preferred Shares subject to the Void Optional Redemption Notice, (ii) the Company shall immediately return any Series B Preferred Shares subject to the Void Optional Redemption Notice and (iii) the Conversion Price of such returned Series B Preferred Shares shall be adjusted to the lesser of (A) the Conversion Price as in effect on the date on which the Void Optional Redemption Notice is delivered to the Company and (B) the lowest Weighted Average Price of the Common Stock during the period beginning on the date on which the applicable Redemption Notice is delivered to the Company and ending on the date on which the applicable Void Optional Redemption Notice is delivered to the Company and ending on and including the date on which the applicable Redemption Notice is voided. A Holder's delivery of a Void Optional Redemption Notice and exercise of its rights following such notice shall not affect the Company's obligations to make any payments of Late Charges which have accrued prior to the date of such notice with respect to the Conversion Amount subject to such notice.

(8) Other Rights of Holders.

(a) Change of Control Redemption Right. No sooner than fifteen (15) days nor later than ten (10) days prior to the consummation of a Change of Control, but not prior to the public announcement of such Change of Control, the Company shall deliver written notice thereof via electronic mail and

overnight courier to the Holders (a “**Change of Control Notice**”) setting forth a description of such transaction in reasonable detail and the anticipated Change of Control Redemption Date if then known. At any time during the period (the “**Change of Control Period**”) beginning after a Holder’s receipt of a Change of Control Notice and ending on the date that is twenty (20) Trading Days after the consummation of such Change of Control, such Holder may require the Company to redeem (a “**Change of Control Redemption**”) all or any portion of such Holder’s Series B Preferred Shares by delivering written notice thereof (“**Change of Control Redemption Notice**”) to the Company, which Change of Control Redemption Notice shall indicate the Conversion Amount such Holder is electing to redeem. Any Series B Preferred Shares subject to redemption pursuant to this Section 8(a) shall be redeemed by the Company in cash at a price equal to greater of (i) 125% of the Conversion Amount being redeemed and (ii) the product of (A) the Conversion Amount being redeemed and (B) the quotient determined by dividing (1) the greatest Closing Sale Price of the shares of Common Stock during the period beginning on the date immediately preceding the earlier to occur of (x) the consummation of the Change of Control and (y) the public announcement of such Change of Control and ending on the date the Holder delivers the Change of Control Redemption Notice, by (II) the lowest Conversion Price in effect during such period (the “**Change of Control Redemption Price**”). The Company shall make payment of the Change of Control Redemption Price concurrently with the consummation of such Change of Control if such a Change of Control Redemption Notice is received prior to the consummation of such Change of Control and within five (5) Trading Days after the Company’s receipt of such notice otherwise (the “**Change of Control Redemption Date**”). To the extent redemptions required by this Section 8(a) are deemed or determined by a court of competent jurisdiction to be prepayments of the Series B Preferred Shares by the Company, such redemptions shall be deemed to be voluntary prepayments. Notwithstanding anything to the contrary in this Section 8(a), until the Change of Control Redemption Price (together with any interest thereon) is paid in full, the Conversion Amount submitted for redemption under this Section 8(a) may be converted, in whole or in part, by a Holder into shares of Common Stock, or in the event the Conversion Date is after the consummation of the Change of Control, shares or equity interests of the Successor Entity substantially equivalent to the Company’s Common Stock pursuant to Section 5(c). In the event less than all of a Holder’s remaining Series B Preferred Shares are redeemed pursuant hereto, the Conversion Amount so redeemed shall be deducted from the Installment Amounts applying such reduction to the Installment Dates in reverse order first to the last Installment Date on which Installment Amounts are then scheduled to be paid to such Holder, unless such Holder shall otherwise specify in the Change of Control Redemption Notice or other applicable notice. The parties hereto agree that in the event of the Company’s redemption of any portion of the Series B Preferred Shares under this Section 8(a), the Holders’ damages would be uncertain and difficult to estimate because of the parties’ inability to predict future interest rates and the

uncertainty of the availability of a suitable substitute investment opportunity for the Holders. Accordingly, any redemption premium due under this Section 8(a) is intended by the parties to be, and shall be deemed, a reasonable estimate of the Holders' actual loss of its investment opportunity and not as a penalty. In the event that the Company does not pay the Change of Control Redemption Price on the Change of Control Redemption Date, then the Holders shall have the right to void the redemption pursuant to Section 7(c).

(b) Assumption. The Company shall not enter into or be party to a Fundamental Transaction unless the Successor Entity assumes in writing all of the obligations of the Company under this Certificate of Designations and the other Transaction Documents in accordance with the provisions of this Section 8(b) and agrees to deliver to each Holder in exchange for such Holder's Series B Preferred Shares a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Certificate of Designations including, without limitation, having a stated value equal to the Stated Value and having similar conversion rights, dividend rights and ranking to the Series B Preferred Shares. Upon the occurrence or consummation of any Fundamental Transaction, and it shall be a required condition to the occurrence or consummation of any Fundamental Transaction that, the Company and the Successor Entity or Successor Entities, jointly and severally, shall succeed to, and the Company shall cause any Successor Entity or Successor Entities to jointly and severally succeed to, and be added to the term "Company" under this Certificate of Designations (so that from and after the date of such Fundamental Transaction, each and every provision of this Certificate of Designations referring to the "Company" shall refer instead to each of the Company and the Successor Entity or Successor Entities, jointly and severally), and the Company and the Successor Entity or Successor Entities, jointly and severally, may exercise every right and power of the Company prior thereto and shall assume all of the obligations of the Company prior thereto under this Certificate of Designations with the same effect as if the Company and such Successor Entity or Successor Entities, jointly and severally, had been named as the Company in this Certificate of Designations; and, solely at the request of a Holder, if the Successor Entity and/or Successor Entities is a publicly traded corporation whose common capital stock is quoted on or listed for trading on an Eligible Market, shall deliver (in addition to and without limiting any right under this Certificate of Designations) to such Holder in exchange for such Holder's Series B Preferred Shares a security of the Successor Entity and/or Successor Entities evidenced by a written instrument substantially similar in form and substance to the Series B Preferred Shares and convertible for a corresponding number of shares of capital stock of the Successor Entity and/or Successor Entities (the "**Successor Capital Stock**") equivalent (as set forth below) to the shares of Common Stock acquirable and receivable upon conversion of such Holder's Series B Preferred Shares (without regard to any limitations on the conversion of the Series B Preferred Shares set forth in this Certificate of Designations) prior to such Fundamental Transaction (provided, however, to the extent that a Holder's right to receive any such shares of publicly traded common stock (or

their equivalent) of the Successor Entity would result in such Holder and its other Attribution Parties exceeding the applicable Maximum Percentage, then such Holder shall not be entitled to receive such shares to such extent (and shall not be entitled to beneficial ownership of such shares of publicly traded common stock (or their equivalent) of the Successor Entity as a result of such consideration to such extent) and the portion of such shares shall be held in abeyance for such Holder until such time or times, as its right thereto would not result in such Holder and its other Attribution Parties exceeding the applicable Maximum Percentage, at which time or times such Holder shall be delivered such shares to the extent as if there had been no such limitation), and such security shall be satisfactory to such Holder, and with an identical conversion price to the Conversion Price hereunder (such adjustments to the number of shares of capital stock and such conversion price being for the purpose of protecting after the consummation or occurrence of such Fundamental Transaction the economic value of the Series B Preferred Shares that was in effect immediately prior to the consummation or occurrence of such Fundamental Transaction, as elected by such Holder solely at its option). Upon occurrence or consummation of the Fundamental Transaction, and it shall be a required condition to the occurrence or consummation of such Fundamental Transaction that, the Company and the Successor Entity or Successor Entities shall deliver to each Holder confirmation that there shall be issued upon conversion of the Series B Preferred Shares at any time after the occurrence or consummation of the Fundamental Transaction, as elected by a Holder solely at its option, shares of Common Stock, Successor Capital Stock or, in lieu of the shares of Common Stock or Successor Capital Stock (or other securities, cash, assets or other property purchasable upon the conversion of the Series B Preferred Shares prior to such Fundamental Transaction), such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights), which for purposes of clarification may continue to be shares of Common Stock, if any, that such Holder would have been entitled to receive upon the happening of such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction, had such Holder's Series B Preferred Shares been converted immediately prior to such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction (without regard to any limitations on the conversion of the Series B Preferred Shares), as adjusted in accordance with the provisions of this Certificate of Designations. The provisions of this Section 8(b) shall apply similarly and equally to successive Fundamental Transactions and shall be applied without regard to any limitations on the conversion of the Series B Preferred Shares.

(c) Corporate Events. In addition to and not in substitution for any other rights hereunder, prior to the occurrence or consummation of any Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities, cash, assets or other property with respect to or in exchange for shares of Common Stock (a "**Corporate Event**"), the Company

shall make appropriate provision to ensure that, and any applicable Successor Entity or Successor Entities shall ensure that, and it shall be a required condition to the occurrence or consummation of such Corporate Event that, such Holder will thereafter have the right to receive at its option upon surrender of such Holder's Series B Preferred Shares upon the occurrence or consummation of the Corporate Event, in lieu of the shares of Common Stock (or other securities, cash, assets or other property) such Holder is entitled to receive upon the conversion of such Holder's Series B Preferred Shares prior to such Corporate Event (but not in lieu of such items still issuable under Sections 4(b) and 8(d), which shall continue to be receivable on the Common Stock or on such shares of stock, securities, cash, assets or any other property otherwise receivable with respect to or in exchange for shares of Common Stock), such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights and any shares of Common Stock) which the Holders would have been entitled to receive upon the occurrence or consummation of such Corporate Event or the record, eligibility or other determination date for the event resulting in such Corporate Event, had such Holder's Series B Preferred Shares been converted immediately prior to such Corporate Event or the record, eligibility or other determination date for the event resulting in such Corporate Event (without regard to any limitations on conversion, including without limitation, the applicable Maximum Percentage) (provided, however, to the extent that a Holder's right to receive any such shares of publicly traded common stock (or their equivalent) of the Successor Entity would result in such Holder and its other Attribution Parties exceeding the applicable Maximum Percentage, then such Holder shall not be entitled to receive such shares to such extent (and shall not be entitled to beneficial ownership of such shares of publicly traded common stock (or their equivalent) of the Successor Entity as a result of such consideration to such extent) and the portion of such shares shall be held in abeyance for such Holder until such time or times, as its right thereto would not result in such Holder and its other Attribution Parties exceeding the applicable Maximum Percentage, at which time or times such Holder shall be delivered such shares to the extent as if there had been no such limitation). The provisions of this Section shall apply similarly and equally to successive Fundamental Transactions and shall be applied without regard to any limitations on the conversion of the Series B Preferred Shares.

(d) Purchase Rights. If at any time the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the "**Purchase Rights**"), then the Holders will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which such Holder could have acquired if such Holder had held the number of shares of Common Stock acquirable upon complete conversion of the Series B Preferred Shares (without taking into account any limitations or restrictions on the convertibility of the Series B Preferred Shares) immediately before the date on which a record is taken for the grant, issuance or sale of such

Purchase Rights, or, if no such record is taken, the date as of which the record holders of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that to the extent that a Holder's right to participate in any such Purchase Right would result in such Holder and its other Attribution Parties exceeding the applicable Maximum Percentage, then such Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for such Holder until such time or times as its right thereto would not result in such Holder and its other Attribution Parties exceeding the applicable Maximum Percentage, at which time or times such Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right to be held similarly in abeyance) to the same extent as if there had been no such limitation).

(9) COMPANY CONVERSION OR REDEMPTION.

(a) General. On each applicable Installment Date, provided there has been no Equity Conditions Failure during the Equity Conditions Measuring Period relating to the applicable Installment Date, the Company shall pay to each Holder the Installment Amount due on such date by converting all or some of such Installment Amount into Common Stock in accordance with this Section 9 (a "**Company Conversion**"); provided, however, that the Company may, at its option following written notice to each Holder as set forth below, pay the Installment Amount by redeeming such Installment Amount in cash (a "**Company Redemption**") or by any combination of a Company Conversion and a Company Redemption so long as all of the applicable Installment Amount due on any Installment Date shall be converted and/or redeemed by the Company on the applicable Installment Date, subject to the provisions of this Section 9; provided, further, that in the event that the sole cause of an Equity Conditions Failure during the applicable Equity Conditions Measuring Period was due to the disclosure of material nonpublic information regarding the Company or any of its Subsidiaries, which constitutes an Equity Conditions Failure pursuant to clause (viii) of the definition of "Equity Conditions", then, solely if such Holder does not waive such Equity Conditions Failure in writing, the Company may, at its option, elect to pay the Installment Amount in cash (irrespective of any prior election or notice to pay such amount by converting all or some of the applicable Installment Amount into Common Stock) or by deferring such Installment Payment to the immediately subsequent Installment Date in accordance with the procedures set forth in Section 9(d). The Company shall deliver a written notice to the Holders setting forth its election pursuant to the immediately preceding sentence at least one (1) Trading Day prior to the applicable Installment Date. On or prior to the date which is the twenty-first (21st) Trading Day prior to each Installment Date (each, an "**Installment Notice Due Date**"), each Holder shall have received from the Company written notice (each, a "**Company Installment Notice**" and the date all the Holders receive such notice is referred to as the "**Company Installment Notice Date**"), which Company Installment Notice shall either (A) confirm that the applicable Installment Amount of such Holder's Series B Preferred Shares shall be converted to Common Stock in whole or in part pursuant to a Company Conversion (such amount to be converted, the

“**Company Conversion Amount**”) or (B) (1) state that the Company elects to redeem for cash, or is required to redeem for cash in accordance with the provisions of this Certificate of Designations, in whole or in part, the applicable Installment Amount pursuant to a Company Redemption and (2) specify the portion of such Installment Amount which the Company elects or is required to redeem pursuant to a Company Redemption (such amount to be redeemed, the “**Company Redemption Amount**”) and the portion of such Installment Amount that is the Company Conversion Amount, which amounts, when added together, must equal the applicable Installment Amount. Each Company Installment Notice shall be irrevocable. If the Company does not timely deliver a Company Installment Notice in accordance with this Section 9, then the Company shall be deemed to have delivered an irrevocable Company Installment Notice confirming a Company Conversion. The Company shall pay the Installment Amount in Common Stock pursuant to a Company Conversion and/or in cash pursuant to a Company Redemption pursuant to this Section 9 in the same ratio for all Holders. The Company Conversion Amount (whether set forth in the Company Installment Notice or by operation of this Section 9) shall be converted in accordance with Section 9(b) and the Company Redemption Amount shall be redeemed in accordance with Section 9(c).

(b) Mechanics of Company Conversion. If the Company delivers a Company Installment Notice and confirms, or is deemed to have confirmed, in whole or in part, a Company Conversion in accordance with Section 9(a), then (1) contemporaneously with the delivery of the Company Installment Notice on the applicable Company Installment Notice Date, the Company shall, or shall direct the Transfer Agent to, credit each Holder’s account with DTC (or if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and deliver to such Holder a certificate for) a number of shares of Common Stock (the “**Pre-Installment Conversion Shares**”) equal to (x) the quotient of (I) the applicable Company Conversion Amount related to the applicable Installment Date divided by (II) the Company Pre-Installment Conversion Price then in effect, less (y) any then outstanding Installment Conversion Shares Excess and (2) on the applicable Installment Date, (x) the Company shall certify that no Equity Conditions Failure has occurred as of the applicable Installment Date and (y) the Company shall, or shall direct the Transfer Agent to, credit each Holder’s account with DTC (or if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and deliver to such Holder a certificate) for an additional number of shares of Common Stock, if any, equal to the Installment Balance Conversion Shares; provided, that no Equity Conditions Failure has occurred (unless waived in writing by such Holder) on each day during the period commencing on such Company Installment Notice Date through the applicable Installment Date. On the second (2nd) Trading Day immediately after the end of the applicable Equity Conditions Measuring Period, the Company shall deliver a written notice setting forth the calculation of the Installment Balance Conversion Shares (and the calculation of the component parts of such calculation) to each Holder. If a Triggering Event occurs during the period from any Company Installment

Notice Date through the applicable Installment Date, each Holder may elect a Triggering Event Redemption in accordance with Section 6(b) without being required to return to the Company any Pre-Installment Conversion Shares previously delivered to such Holder (but such Pre-Installment Conversion Shares shall reduce any future delivery of Pre-Installment Conversion Shares). All Pre-Installment Conversion Shares and Installment Balance Conversion Shares shall be fully paid and nonassessable shares of Common Stock (rounded to the nearest whole share). If the Company confirmed (or is deemed to have confirmed by operation of Section 9(a)) the conversion of the applicable Company Conversion Amount, in whole or in part, and an Equity Conditions Failure occurs between the applicable Company Installment Notice Date and any time through the applicable Installment Date (the “**Interim Installment Period**”), the Company shall provide each Holder a subsequent written notice to that effect. If an Equity Conditions Failure occurs (unless waived in writing by such Holder) on any day during such Interim Installment Period, then at the option of such Holder designated in writing to the Company within two (2) Trading Days of written notice thereof to such Holder, such Holder may require the Company to do either one of the following: (i) the Company shall redeem all or any part designated by such Holder of the unconverted Company Conversion Amount on such Installment Date and the Company shall pay to such Holder on such Installment Date, by wire transfer of immediately available funds, an amount in cash equal to such portion of such Company Conversion Amount designated by such Holder or (ii) the Company Conversion shall be null and void with respect to all or any part designated by such Holder of the unconverted Company Conversion Amount and such Holder shall be entitled to all the rights of a Holder with respect to such amount of the Company Conversion Amount. If the Company fails to redeem any Company Conversion Amount on or before the applicable Installment Date by payment of such amount on the applicable Installment Date, then such Holder shall have the rights set forth in Section 7 as if the Company failed to pay the applicable Company Installment Redemption Price (as defined below) and all other rights under this Certificate of Designations (including, without limitation, such failure constituting a Triggering Event described in Section 6(a)(v)); provided, however, that upon payment of such Company Conversion Amount within three (3) Business Days, such Triggering Event will be considered cured or waived, as applicable. Notwithstanding the foregoing, if a Holder waives in writing an Equity Conditions Failure during the applicable Interim Installment Period, then the Company shall be required to proceed with the applicable Company Conversion with respect to such Holder Notwithstanding anything to the contrary in this Section 9(b), but subject to the limitations set forth in Section 5(e), until the Company credits a Holder’s account with DTC, or if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issues and delivers to such Holder a certificate for, the shares of Common Stock representing the Company Conversion Amount to such Holder, the Company Conversion Amount may be converted by such Holder into Common Stock pursuant to Sections 5(c) and/or 5(g)(v).

(c) Mechanics of Company Redemption. If the Company elects a Company Redemption in accordance with Section 9, then the Company Redemption Amount which is to be paid to each Holder on the applicable Installment Date shall be redeemed by the Company and the Company shall pay to such Holder on such Installment Date, by wire transfer of immediately available funds, an amount in cash (the “**Company Installment Redemption Price**”) equal to the Company Redemption Amount. If the Company fails to redeem the Company Redemption Amount on the applicable Installment Date by payment of the Company Installment Redemption Price on such date, then at the option of a Holder designated in writing to the Company (any such designation shall be deemed a “**Conversion Notice**” pursuant to Section 5(c) for purposes of this Certificate of Designations), (i) such Holder shall have the rights set forth in Section 7 as if the Company failed to pay the applicable Company Installment Redemption Price and all other rights as a Holder (including, without limitation, such failure constituting a Triggering Event described in Section 6(a)(v)) and (ii) such Holder may require the Company to convert all or any part of such Company Redemption Amount at the Company Installment Conversion Price as in effect on the applicable Installment Date; provided, however, that upon payment of such Redemption Amount within three (3) Business Days, such Triggering Event will be considered cured or waived, as applicable. Conversions required by this Section 9(c) shall be made in accordance with the provisions of Section 5(c). Notwithstanding anything to the contrary in this Section 9(c), but subject to Section 5(e), until the Company Installment Redemption Price (together with any interest thereon) is paid in full, the Company Redemption Amount (together with any interest thereon) may be converted, in whole or in part, by a Holder into Common Stock pursuant to Sections 5(c) and/or 5(g)(v).

(d) Deferred Installment Amount. Notwithstanding any provision of this Section 9 to the contrary, each Holder may from time to time (i) at its option and in its sole discretion but subject to the last sentence of this Section 9(d) or (ii) with the prior written consent of the Company, deliver a written notice to the Company no later than the Business Day immediately prior to the applicable Installment Date (which date shall not be after the Maturity Date) electing to have the payment of all or any portion of an Installment Amount payable on such Installment Date deferred (such amount(s) deferred, the “**Deferral Amount**”) until the immediately subsequent Installment Date (if any), in which case, the Deferral Amount shall be added to, and become part of, the Installment Amount to be paid on such subsequent Installment Date. Any notice delivered by a Holder pursuant to this Section 9(d) shall set forth (i) the Deferral Amount requested by such Holder and (ii) the date on which such Holder requests that such Deferral Amount shall be payable (which date shall be the immediately subsequent Installment Date). Without the prior written consent of the Company, in no event shall a Holder be entitled to elect deferral pursuant to this Section 9(d) (x) on more than one (1) occasion in any two (2) month period, or (y) if such deferral would defer an Installment Amount beyond the Maturity Date.

(10) Reservation of Shares.

(a) The Company shall have sufficient authorized and unissued shares of Common Stock for each of the Series B Preferred Shares equal to 150% of the number of shares of Common Stock necessary to effect the conversion at the Conversion Rate (without regard to any limitations herein on any such conversion) with respect to the Conversion Amount of each such Series B Preferred Share as of the Issuance Date. The Company shall, so long as any of the Series B Preferred Shares are outstanding, take all reasonable action necessary to reserve and keep available out of its authorized and unissued Common Stock, solely for the purpose of effecting the conversions of the Series B Preferred Shares, such number of shares of Common Stock as shall from time to time be necessary to effect the conversion of all of the Series B Preferred Shares then outstanding (with the actions set forth in Section 10(b) be deemed reasonable and necessary); provided that at no time shall the number of shares of Common Stock so reserved shall at no time be less than 150% of the number of shares of Common Stock for which the Series B Preferred Shares are at any time convertible (without regard to any limitations on conversions) (the “**Required Reserve Amount**”). The initial number of shares of Common Stock reserved for conversions of the Series B Preferred Shares and each increase in the number of shares so reserved shall be allocated pro rata among the Holders based on the number of Series B Preferred Shares held by each Holder at the time of issuance of the Series B Preferred Shares or increase in the number of reserved shares, as the case may be (the “**Authorized Share Allocation**”). In the event a Holder shall sell or otherwise transfer any of such Holder’s Series B Preferred Shares, each transferee shall be allocated a pro rata portion of the number of reserved shares of Common Stock reserved for such transferor. Any shares of Common Stock reserved and allocated to any Person which ceases to hold any Series B Preferred Shares (other than pursuant to a transfer of Series B Preferred Shares in accordance with the immediately preceding sentence) shall be allocated to the remaining Holders of Series B Preferred Shares, pro rata based on the number of Series B Preferred Shares then held by such Holders.

(b) Insufficient Authorized Shares. If at any time while any of the Series B Preferred Shares remain outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance upon conversion of the Series B Preferred Shares at least a number of shares of Common Stock equal to the Required Reserve Amount (an “**Authorized Share Failure**”), then the Company shall promptly take all reasonable action necessary to increase the Company’s authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for the Series B Preferred Shares then outstanding (with the actions set forth in this Section 10(b) be deemed reasonable and necessary). Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than ninety (90) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its reasonable best efforts to solicit its stockholders’ approval of such increase in

authorized shares of Common Stock and to cause the Board to recommend to the stockholders that they approve such proposal. Notwithstanding the foregoing, if at any such time of an Authorized Share Failure, the Company is able to obtain the written consent of a majority of the shares of its issued and outstanding Common Stock to approve the increase in the number of authorized shares of Common Stock, the Company may satisfy this obligation by obtaining such consent and submitting for filing with the SEC an Information Statement on Schedule 14C.

(11) Voting Rights. Except as required by applicable law, the Series B Preferred Shares shall not have any voting rights.

(12) Equal Treatment of Holders. No consideration shall be offered or paid to any of the Holders to amend or waive or modify any provision of the Series B Preferred Shares or the Warrants, unless the same consideration (other than the reimbursement of legal fees) is also offered to all of the Holders. This provision constitutes a separate right granted to each of the Holders by the Company and shall not in any way be construed as the Holders acting in concert or as a group with respect to the purchase, disposition or voting of securities or otherwise.

(13) Negative Covenants. Until all of the Series B Preferred Shares have been converted, redeemed or otherwise satisfied in accordance with their terms, the Company shall not, and the Company shall not permit any of its Subsidiaries to, without the prior written consent of the Required Holders, directly or indirectly:

(a) incur or guarantee, assume or suffer to exist any Indebtedness, other than Permitted Indebtedness;

(b) allow or suffer to exist any mortgage, lien, pledge, charge, security interest or other encumbrance upon or in any property or assets (including accounts and contract rights) owned by the Company or any of its Subsidiaries (collectively, "Liens") other than Permitted Liens;

(c) encumber or allow any Liens on, any of its copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work, whether published or unpublished, any patents, patent applications and like protections, including improvements, divisions, continuations, renewals, reissues, extensions, and continuations-in-part of the same, trademarks, service marks and, to the extent permitted under applicable law, any applications therefor, whether registered or not, and the goodwill of the business of the Company and its Subsidiaries connected with and symbolized thereby, know-how, operating manuals, trade secret rights, rights to unpatented inventions, and any claims for damage by way of any past, present, or future infringement of any of the foregoing, other than Permitted Liens;

(d) redeem, defease, repurchase, repay or make any payments in respect of, by the payment of cash or cash equivalents (in whole or in part, whether by way of open market purchases, tender offers, private transactions or otherwise), all or any portion of any Indebtedness, whether by way of payment in respect of principal of (or premium, if any) or

interest on, such Indebtedness if at the time such payment is due or is otherwise made or, after giving effect to such payment, an event constituting, or that with the passage of time and without being cured would constitute, a Triggering Event has occurred and is continuing;

(e) other than with respect to the Series B Preferred Shares in accordance with the terms of the Certificate of Designations or the repurchase of any Equity Interests from consultants and other service providers to the Company as of the Subscription Date and from directors, officers and employees, in each case, in connection with the termination of such person's applicable relationship with the Company, redeem or repurchase any of its Equity Interests (except on a pro rata basis among all holders thereof);

(f) pay any cash dividend or distribution on any Equity Interest of the Company or of its Subsidiaries;

(g) make, any material change in the nature of its business as described in the Company's SEC Documents (as defined in the Securities Purchase Agreement);

(h) enter into, renew, extend or be a party to, any transaction or series of related transactions with an aggregate value in excess of \$500,000 (including, without limitation, the purchase, sale, lease, transfer or exchange of property or assets of any kind or the rendering of services of any kind) with any Affiliate, except in the ordinary course of business in a manner and to an extent consistent with past practice or otherwise necessary or desirable for the prudent operation of its business, in each case, for fair consideration and on terms no less favorable to it or its Subsidiaries than would be obtainable in a comparable arm's length transaction with a Person that is not an Affiliate thereof;

(i) issue or sell any rights, warrants or options to subscribe for or purchase Common Stock or directly or indirectly convertible into or exchangeable or exercisable for Common Stock at a price which varies or may vary with the market price of the Common Stock, including by way of one or more reset(s) to any fixed price unless the conversion, exchange or exercise price of any such security cannot be less than the then applicable Conversion Price; or

(j) create (by reclassification or otherwise), or authorize the creation of, or issue or obligate itself to issue additional or other capital stock or securities exchangeable for or convertible or exercisable into capital stock that is Pari Passu Stock or ranks senior to the Series B Preferred Shares in respect of the preferences as to distributions, the payment of dividends and payments upon a Liquidation Event.

(14) Affirmative Covenants. Until all of the Series B Preferred Shares have been converted, redeemed or otherwise satisfied in accordance with their terms, the Company shall, unless otherwise agreed to by the Required Holders:

(a) maintain on deposit unrestricted cash in an aggregate amount equal to not less than the lower of (i) \$3,500,000 and (ii) the Conversion Amount that remains outstanding as of the applicable date of determination; and

(b) maintain its existence as a Delaware corporation.

(15) Vote to Change the Terms of or Issue Series B Preferred Shares. In addition to any other rights provided by law, except where the vote or written consent of the holders of a greater number of shares is required by law or by another provision of the Certificate of Incorporation, the affirmative vote at a meeting duly called for such purpose or the written consent without a meeting of the Required Holders, voting together as a single class, shall be required before the Company may: (a) amend or repeal any provision of, or add any provision to, the Certificate of Incorporation or bylaws, or file any articles of amendment, certificate of designations, preferences, limitations and relative rights of any series of preferred stock, if such action would adversely alter or change the preferences, rights, privileges or powers of, or restrictions provided for the benefit of the Series B Preferred Shares, regardless of whether any such action shall be by means of amendment to the Certificate of Incorporation or by merger, consolidation or otherwise; (b) increase or decrease (other than by conversion) the authorized number of shares of Series B Preferred Shares; (c) amend or waive any provision of the Certificate of Designations with respect to the Series B Preferred Shares or (d) circumvent a right of the Series B Preferred Shares; provided, that in no event shall the consent of any Holders be required in connection with any Liquidation Event or Fundamental Transaction or in connection with the proposals (other than the Stockholder Approval) included in the proxy statement to be filed in connection with the 2017 annual meeting of stockholders of the Company; provided, further, that any such amendment or waiver that complies with the foregoing but that disproportionately, materially and adversely affects the rights and obligations of any Holder relative to the comparable rights and obligations of the other Holders shall require the prior written consent of such adversely affected Holder. Any amendment or waiver to this Certificate of Incorporation made in conformity with the provisions of this Section 15 shall be binding on all Holders. No such amendment or waiver shall be effective to the extent that it applies to less than all of the Holders.

(16) General Provisions.

(a) In addition to the above provisions with respect to Series B Preferred Shares, such Series B Preferred Shares shall be subject to and be entitled to the benefit of the provisions set forth in the Certificate of Incorporation of the Company with respect to preferred stock of the Company generally; provided, however, that in the event of any conflict between such provisions, the provisions set forth in this Certificate of Designations shall control.

(b) Any Series B Preferred Shares which are converted, repurchased or redeemed shall be automatically and immediately cancelled and shall not be reissued, sold or transferred.

(c) Whenever notice is required to be given under this Certificate of Designations, unless otherwise provided herein, such notice shall be given in accordance with Section 9(f) of the Securities Purchase Agreement.

(d) Whenever any payment of cash is to be made by the Company to any Person pursuant to this Certificate of Designations, such payment shall be made in lawful money of the United States of America by a check drawn on the account of the Company and sent via overnight courier service to such Person at such address as previously provided to the Company in writing (which address, in the case of each of the Buyers, shall initially be as set forth on the

Schedule of Buyers attached to the Securities Purchase Agreement); provided, that a Holder may elect to receive a payment of cash via wire transfer of immediately available funds by providing the Company with no less than two (2) Business Days prior written notice setting out such request and such Holder's wire transfer instructions. Whenever any amount expressed to be due by the terms of this Certificate of Designations is due on any day which is not a Business Day, the same shall instead be due on the next succeeding day which is a Business Day. Any amount of Stated Value or other amounts due under the Transaction Documents which is not paid within three (3) Business Days of the time such amount is due shall result in a late charge being incurred and payable by the Company in an amount equal to interest on such amount at the rate of twelve percent (12.0%) per annum from the date such amount was due until the same is paid in full ("**Late Charge**").

(17) Governing Law; Jurisdiction; Jury Trial. This Certificate of Designations shall be construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Certificate of Designations shall be governed by, the internal laws of the State of Delaware, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Delaware or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Delaware. The Company and each Holder hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. The Company and each Holder hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address it set forth on the signature page hereto and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. **THE COMPANY AND EACH HOLDER HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS CERTIFICATE OF DESIGNATIONS OR ANY TRANSACTION CONTEMPLATED HEREBY.**

(18) Lost or Stolen Certificates. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of any Series B Preferred Stock Certificates representing the Series B Preferred Shares, and, in the case of loss, theft or destruction, of an indemnification undertaking by such Holder to the Company in customary form and, in the case of mutilation, upon surrender and cancellation of the Series B Preferred Stock Certificate(s), the Company shall execute and deliver new preferred stock certificate(s) of like tenor and date; provided, however, the Company shall not be obligated to re-issue preferred stock certificates if such Holder contemporaneously requests the Company to convert such Series B Preferred Shares into Common Stock.

(19) Remedies, Characterizations, Other Obligations, Breaches and Injunctive Relief. The remedies provided in this Certificate of Designations shall be cumulative and in addition to all other remedies available under this Certificate of Designations, at law or in equity (including a decree of specific performance and/or other injunctive relief). No remedy contained herein shall be deemed a waiver of compliance with the provisions giving rise to such remedy. Nothing herein shall limit a Holder's right to pursue actual damages for any failure by the Company to comply with the terms of this Certificate of Designations. The Company covenants to each Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, conversion and the like (and the computation thereof) shall be the amounts to be received by such Holder thereof and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holders and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the Holders shall be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required.

(20) Construction. This Certificate of Designations shall be deemed to be jointly drafted by the Company and all Holders and shall not be construed against any person as the drafter hereof.

(21) Failure or Indulgence Not Waiver. No failure or delay on the part of a Holder in the exercise of any power, right or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such power, right or privilege preclude other or further exercise thereof or of any other right, power or privilege.

(22) Transfer of Series B Preferred Shares. A Holder may assign some or all of the Series B Preferred Shares and the accompanying rights hereunder held by such Holder without the consent of the Company; provided that such assignment is in compliance with applicable securities laws. Notwithstanding the foregoing, in no event shall any Holder that is an officer or director of the Company, or a Person that is controlled by an officer or director of the Company be permitted to transfer any of its Series B Preferred Shares prior to the time the Company obtains Stockholder Approval. Holders shall have the right to transfer and to exercise rights with respect to fractional Series B Preferred Shares and any redemptions of Series B Preferred Shares by the Company shall be made calculating the number of applicable Series B Preferred Shares to one-one thousandth of a Series B Preferred Share.

(23) Series B Preferred Share Register. The Company shall maintain at its principal executive offices (or such other office or agency of the Company as it may designate by notice to the Holders), a register for the Series B Preferred Shares, in which the Company shall record the name and address of the persons in whose name the Series B Preferred Shares have been issued, as well as the name and address of each transferee. The Company may treat the person in whose name any Series B Preferred Share is registered on the register as the owner and holder thereof for all purposes, notwithstanding any notice to the contrary, but in all events recognizing any properly made transfers.

(24) **Disclosure.** Upon receipt or delivery by the Company of any notice in accordance with the terms of this Certificate of Designations, unless the Company has in good faith determined that the matters relating to such notice do not constitute material, nonpublic information relating to the Company or its Subsidiaries, the Company shall, unless any provision of any Transaction Document provides otherwise with respect to the receipt or delivery of a particular notice in accordance with the terms and conditions of the Transaction Documents, within two (2) Business Days after any such receipt or delivery publicly disclose such material, nonpublic information on a Current Report on Form 8-K or otherwise. In the event that the Company believes that a notice contains material, nonpublic information relating to the Company or its Subsidiaries, the Company so shall indicate to the Holders contemporaneously with delivery of such notice, and in the absence of any such indication, the Holders shall be allowed to presume that all matters relating to such notice do not constitute material, nonpublic information relating to the Company or its Subsidiaries. For purposes of this Section 24, public disclosure of any information by a stockholder of the Company (including any filing pursuant to Section 13 or Section 16 of the Exchange Act) shall satisfy the requirement that such information be publicly disclosed by the Company.

(25) **Certain Defined Terms.** For purposes of this Certificate of Designations, Preferences and Rights of Series B Preferred Shares of the Company (this “**Certificate of Designations**”) the following terms shall have the following meanings:

(a) “**Affiliate**” shall have the meaning ascribed to such term in Rule 405 of the Securities Act.

(b) “**Allocation Percentage**” means a fraction, the numerator of which is the number of Series B Preferred Shares issued to a given Holder on the Issuance Date and the denominator of which is the aggregate amount of all Series B Preferred Shares issued by the Company on the Issuance Date.

(c) “**Approved Stock Plan**” means any employee benefit plan which has been approved by the Board, pursuant to which the Company’s securities may be issued to any employee, officer, director or consultant for services provided to the Company.

(d) “**Attribution Parties**” means, collectively, the following Persons and entities: (i) any investment vehicle, including, any funds, feeder funds or managed accounts, currently, or from time to time after the Issuance Date, directly or indirectly managed or advised by such Holder’s investment manager or any of its Affiliates or principals, (ii) any direct or indirect Affiliates of such Holder or any of the foregoing, (iii) any Person acting or who could be deemed to be acting as a Group together with such Holder or any of the foregoing and (iv) any other Persons whose beneficial ownership of the Company’s Common Stock would or could be aggregated with such Holder’s and the other Attribution Parties for purposes of Section 13(d) of the Exchange Act. For clarity, the purpose of the foregoing is to subject collectively such Holder and all other Attribution Parties to the applicable Maximum Percentage.

(e) **“Bloomberg”** means Bloomberg Financial Markets.

(f) **“Business Day”** means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

(g) **“Change of Control”** means any Fundamental Transaction other than (A) any reorganization, recapitalization or reclassification of the Common Stock in which holders of the Company’s voting power immediately prior to such reorganization, recapitalization or reclassification continue after such reorganization, recapitalization or reclassification to hold publicly traded securities and, directly or indirectly, the voting power of the surviving entity or entities necessary to elect a majority of the members of the board of directors (or their equivalent if other than a corporation) of such entity or entities, (B) pursuant to a migratory merger effected solely for the purpose of changing the jurisdiction of incorporation of the Company, (C) resulting from an issuance of securities by the Company pursuant to the Transaction Documents or (D) resulting from one or more bona fide transactions the primary purpose of which is to raise capital; provided, however, that no Subject Entity party to such bona fide transaction acquires either (1) 50% or more of the outstanding shares of Common Stock, or (2) beneficial ownership (as defined in Rule 13d-3 under the Exchange Act) of 50% or more of the outstanding shares of Common Stock.

(h) **“Closing Bid Price”** and **“Closing Sale Price”** means, for any security as of any date, the last closing bid price and last closing trade price, respectively, for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing bid price or the closing trade price, as the case may be, then the last bid price or the last trade price, respectively, of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last closing bid price or last trade price, respectively, of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not apply, the last closing bid price or last trade price, respectively, of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no closing bid price or last trade price, respectively, is reported for such security by Bloomberg, the average of the bid prices, or the ask prices, respectively, of any market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Closing Bid Price or the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Bid Price or the Closing Sale Price, as the case may be, of such security on such date shall be the fair market value as mutually determined by the Company and the applicable Holder. If the Company and such Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 5(c)(iii). All such determinations to be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

(i) “**Company Installment Conversion Price**” means, with respect to the applicable Installment Date or other applicable date of determination, that price which shall be the lowest of (i) the then applicable Conversion Price, (ii) 85% of the arithmetic average of the three (3) lowest Weighted Average Prices of the Common Stock during the ten (10) consecutive Trading Day period ending on the Trading Day immediately preceding the applicable Installment Date or other date of determination and (iii) 85% of the Weighted Average Price of the Common Stock on the Trading Day immediately preceding the applicable Installment Date or other date of determination.

(j) “**Company Pre-Installment Conversion Price**” means, with respect to any Company Installment Notice Date or other applicable date of determination, that price which shall be the lowest of (i) the then applicable Conversion Price, (ii) 85% of the arithmetic average of the three (3) lowest Weighted Average Prices of the Common Stock during the ten (10) consecutive Trading Day period ending on the Trading Day immediately preceding the applicable Company Installment Notice Date or other date of determination and (iii) 85% of the Weighted Average Price of the Common Stock on the Trading Day immediately preceding the applicable Company Installment Notice Date or other date of determination.

(k) “**Common Stock**” means (i) the Company’s shares of Common Stock, par value \$0.0001 per share and (ii) any stock capital into which such Common Stock shall have been changed or any stock capital resulting from a reorganization, recapitalization or reclassification of such Common Stock.

(l) “**Contingent Obligation**” means, as to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to any indebtedness, lease, dividend or other obligation of another Person if the primary purpose or intent of the Person incurring such liability, or the primary effect thereof, is to provide assurance to the obligee of such liability that such liability will be paid or discharged, or that any agreements relating thereto will be complied with, or that the holders of such liability will be protected (in whole or in part) against loss with respect thereto.

(m) “**Conversion Amount**” means, for each Series B Preferred Share, the sum of (A) the Stated Value, (B) accrued and unpaid dividends, if any, with respect to such Stated Value and (C) accrued and unpaid Late Charges, if any, with respect to such Stated Value and dividends, if any.

(n) “**Conversion Price**” means \$2.67, subject to adjustment as provided herein.

(o) “**Convertible Securities**” means any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(p) “**Electing Holder**” means such Holder who has elected to be subject to the 9.99% Maximum Percentage by so indicating on the Schedule of Buyers attached to the Securities Purchase Agreement or by otherwise delivering written notice of such election to the Company.

(q) “**Eligible Market**” means the Principal Market, The New York Stock Exchange, Inc., the NYSE MKT, The NASDAQ Global Select Market or The NASDAQ Capital Market.

(r) “**Equity Conditions**” means each of the following conditions: (i) on each day during Equity Conditions Measuring Period, all shares of Common Stock issuable pursuant to the terms of this Certificate of Designations (without regard to any restriction or limitation on conversion as set forth herein), including, without limitation, the shares of Common Stock issuable upon conversion of the Conversion Amount that is subject to the applicable Company Conversion or Mandatory Conversion, as applicable, requiring the satisfaction of the Equity Conditions, shall be either (x) issuable without restrictive legends and shall be eligible for sale without restriction or limitation pursuant to Rule 144 of the Securities Act and without the requirement to be in compliance with Rule 144(c)(1) (or any successor thereto) or Rule 3(a)(9) of the Securities Act and without the need for registration under any applicable federal or state securities laws or (y) be eligible for sale or resale without restriction or limitation pursuant to an effective registration statement; (ii) on each day during the applicable Equity Conditions Measuring Period, the Common Stock is designated for quotation on the Principal Market or any other Eligible Market and shall not have been suspended from trading on such exchange or market (other than suspensions of not more than two (2) days and occurring prior to the applicable date of determination due to business announcements by the Company) nor shall delisting or suspension by such exchange or market have been threatened, commenced or pending either (A) in writing by such exchange or market or (B) by falling below the then effective minimum listing maintenance requirements of such exchange or market; (iii) during the applicable Equity Conditions Measuring Period, the Company shall have delivered all shares of Common Stock pursuant to the terms of this Certificate of Designations to the holders thereof on a timely basis as set forth in Section 5(c) hereof; (iv) the shares of Common Stock issuable upon conversion of the Conversion Amount that is subject to the applicable Company Conversion or Mandatory Conversion, as applicable, requiring the satisfaction of the Equity Conditions may be issued in full without violating Section 5(e) hereof and the rules or regulations of the Principal Market or any other applicable Eligible Market; (v) during the applicable Equity Conditions Measuring Period, the Company shall not have failed to timely make any payments within five (5) Business Days of when such payment is due pursuant to any Transaction

Document; (vi) during the applicable Equity Conditions Measuring Period, there shall not have occurred either (A) the public announcement of a pending, proposed or intended Fundamental Transaction which has not been abandoned, terminated or consummated or (B) a Triggering Event; (vii) the Company shall have no knowledge of any fact that would cause all shares of Common Stock issued and issuable pursuant to this Certificate of Designations, including, without limitation, the shares of Common Stock issuable upon conversion of the Conversion Amount that is subject to the applicable Company Conversion or Mandatory Conversion, as applicable, requiring the satisfaction of the Equity Conditions, not to be eligible for sale without restriction or limitation and without the need for registration under any applicable federal or state securities laws (other than an effective and unqualified registration statement); (viii) such Holder shall not be in possession of any material, nonpublic information regarding the Company or any of its Subsidiaries received from the Company, any Subsidiary or any of their respective agents, employees or Affiliates acting, directly or indirectly, at the direction of the Company, if the event requiring the satisfaction of the Equity Conditions is (A) a Company Conversion, on each of the last ten (10) days during the applicable Equity Conditions Measuring Period, or (B) a Mandatory Conversion, on each day during the applicable Mandatory Conversion Measuring Period; (ix) the shares of Common Stock issuable upon conversion of the Conversion Amount that is subject to the applicable Company Conversion or Mandatory Conversion, as applicable, requiring the satisfaction of the Equity Conditions are duly authorized and listed and eligible for trading without restriction on an Eligible Market; (x) if the event requiring the satisfaction of the Equity Conditions is (A) a Company Conversion, the daily dollar trading volume of the Common Stock as reported by Bloomberg shall be at least \$200,000 on at least ten (10) Trading Days, including all three (3) consecutive Trading Days immediately preceding the applicable date of determination, during the Equity Conditions Measuring Period or (B) a Mandatory Conversion, the daily dollar trading volume of the Common Stock as reported by Bloomberg shall be at least \$200,000 on each of the ten (10) Trading Days immediately preceding the applicable date of determination during the Mandatory Conversion Measuring Period; and (xi) if the event requiring the satisfaction of the Equity Conditions is a Company Conversion, the Weighted Average Price of the Common Stock exceeds \$1.50 (as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the Subscription Date) on at least ten (10) Trading Days, including all three (3) consecutive Trading Days immediately preceding the applicable date of determination, during the Equity Conditions Measuring Period.

(s) **“Equity Conditions Measuring Period”** means each day during the period beginning twenty one (21) Trading Days prior to the applicable date of determination and ending on and including the applicable date of determination.

(t) **“Equity Conditions Failure”** means that on the applicable date of determination the Equity Conditions have not been satisfied (or waived in writing by such Holder).

(u) **“Equity Interests”** means (a) all shares of capital stock (whether denominated as common capital stock or preferred capital stock), equity interests, beneficial, partnership or membership interests, joint venture interests, participations or other ownership or profit interests in or equivalents (regardless of how designated) of or in a Person (other than an individual), whether voting or non-voting and (b) all securities convertible into or exchangeable for any of the foregoing and all warrants, options or other rights to purchase, subscribe for or otherwise acquire any of the foregoing, whether or not presently convertible, exchangeable or exercisable.

(v) **“Exchange Cap Period”** means a period beginning on the delivery of a Conversion Notice to the Company by a Holder which the Company cannot honor due to the Exchange Cap, and ending on the earlier to occur of (i) a subsequent delivery to the Company by such Holder of a Conversion Notice which the Company cannot honor due to the Exchange Cap and (ii) 4:00:00 p.m., New York time (or such other time as the Principal Market or other applicable Eligible Market publicly announces is the official close of trading) on the date of such Holder’s attempted conversion.

(w) **“Exchange Cap Weighted Average Price”** means, for any security, the dollar volume-weighted average price for such security on the Principal Market during the applicable Exchange Cap Period, as reported by Bloomberg through its “Volume at Price” function or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the applicable Exchange Cap Period, as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such period, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.) during such period. If the Exchange Cap Weighted Average Price cannot be calculated for a security on any of the foregoing bases, the Exchange Cap Weighted Average Price of such security on such date shall be the fair market value as mutually determined by the Company and the applicable Holder. If the Company and such Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 5(c)(iii) with the term “Exchange Cap Weighted Average Price” being substituted for the term “Conversion Price.” All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

(x) **“Excluded Securities”** means any Common Stock issued or issuable or deemed to be issued in accordance with Section 5(g) hereof by the Company: (A) under any Approved Stock Plan; (B) with respect to the Series B Preferred Shares pursuant to the terms of this Certificate of Designations; provided, that the Certificate of Designations is not amended, modified or changed on or after the Subscription Date; (C) upon the exercise of the Warrants; provided that the

Warrants are not amended, modified or changed on or after the Subscription Date; (D) upon conversion, exercise or exchange of any Options or Convertible Securities which are outstanding on the day immediately preceding the Subscription Date, provided that such issuance of Common Stock upon exercise of such Options or Convertible Securities is made pursuant to the terms of such Options or Convertible Securities in effect on the date immediately preceding the Subscription Date and such Options or Convertible Securities are not amended, modified or changed on or after the Subscription Date; (E) in connection with obtaining commercially reasonable, arms-length debt financing from any bank, financial institution or institutional lender approved by the Board of Directors of the Company in good faith, (F) in connection with any acquisitions (whether by merger, consolidation, purchase of equity, purchase of assets, reorganization or otherwise), mergers, consolidations, reorganizations or similar transactions by Company or any of its Subsidiaries the terms of which are approved by a majority of the disinterested directors of the Company, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities, (G) in connection with (i) joint venture, licensing or development activities, (ii) distribution, supply or manufacture of the Company's products or services or (iii) any other arrangements involving business partners of the Company that, in each case, are approved by a majority of the disinterested directors of the Company, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities, (H) in connection with the sale of securities to Key Group Development, or an affiliate thereof, with an aggregate purchase price not to exceed \$1,000,000, or (I) with respect to shares of the Company's Series A Junior Participating Preferred Stock issued or issuable pursuant to the Company's poison pill or rights plan then in effect; provided that any Common Stock issued or issuable (or deemed to be issued in accordance with Section 5(g)(i)) by the Company to consultants pursuant to the foregoing clause (A) and/or pursuant to the foregoing clauses (E), (F) and/or (G), which, when combined with all Common Stock issued or issuable (or deemed to be issued in accordance with Section 5(g)(i)) by the Company previously issued to consultants pursuant to the foregoing clause (A) and/or pursuant to the foregoing clauses (E), (F) and/or (G), exceeds 600,000 (as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the Subscription Date) shall not constitute Excluded Securities hereunder.

(y) "**Fundamental Transaction**" means (i) that the Company shall, directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, (a) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Subject Entity, or (b) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company or any of its "significant subsidiaries" (as defined in Rule 1-02 of Regulation S-X) to one or more Subject Entities, or (c) make, or allow one or more Subject Entities to make, or allow the Company to be subject to or have its Common Stock be subject to or party to one or more

Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least either (1) 50% of the outstanding shares of Common Stock, (2) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding; or (3) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the Exchange Act) of at least 50% of the outstanding shares of Common Stock, or (d) consummate a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby such Subject Entities, individually or in the aggregate, acquire, either (1) at least 50% of the outstanding shares of Common Stock, (2) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (3) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the Exchange Act) of at least 50% of the outstanding shares of Common Stock, or (e) reorganize, recapitalize or reclassify its Common Stock, (ii) that the Company shall, directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, allow any Subject Entity individually or the Subject Entities in the aggregate to be or become the “beneficial owner” (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding shares of Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reorganization, recapitalization or reclassification or otherwise in any manner whatsoever, of either (a) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock, (b) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock not held by all such Subject Entities as of the Subscription Date calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (c) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other stockholders of the Company to surrender their shares of Common Stock without approval of the stockholders of the Company or (iii) directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, the issuance of or the entering into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this definition in which case this definition shall be construed and implemented in a manner

otherwise than in strict conformity with the terms of this definition to the extent necessary to correct this definition or any portion of this definition which may be defective or inconsistent with the intended treatment of such instrument or transaction.

(z) “**GAAP**” means United States generally accepted accounting principles, consistently applied.

(aa) “**Group**” means a “group” as that term is used in Section 13(d) of the Exchange Act and as defined in Rule 13d-5 thereunder.

(bb) “**Indebtedness**” of any Person means, without duplication (i) all indebtedness for borrowed money, (ii) all obligations issued, undertaken or assumed as the deferred purchase price of property or services, including (without limitation) “capital leases” in accordance with GAAP (other than trade payables entered into in the ordinary course of business), (iii) all reimbursement or payment obligations with respect to letters of credit, surety bonds and other similar instruments, (iv) all obligations evidenced by notes, bonds, debentures or similar instruments, including obligations so evidenced incurred in connection with the acquisition of property, assets or businesses, (v) all indebtedness created or arising under any conditional sale or other title retention agreement, or incurred as financing, in either case with respect to any property or assets acquired with the proceeds of such indebtedness (even though the rights and remedies of the seller or bank under such agreement in the event of default are limited to repossession or sale of such property), (vi) all monetary obligations under any leasing or similar arrangement which, in connection with GAAP, consistently applied for the periods covered thereby, is classified as a capital lease, (vii) all indebtedness referred to in clauses (i) through (vi) above secured by (or for which the holder of such Indebtedness has an existing right, contingent or otherwise, to be secured by) any mortgage, lien, pledge, charge, security interest or other encumbrance upon or in any property or assets (including accounts and contract rights) owned by any Person, even though the Person which owns such assets or property has not assumed or become liable for the payment of such indebtedness, and (viii) all Contingent Obligations in respect of indebtedness or obligations of others of the kinds referred to in clauses (i) through (vii) above.

(cc) “**Installment Amount**” means with respect to each Installment Date, an amount equal to the sum of (i) with respect to each Holder the aggregate Stated Value of the lesser of (A) such Holder’s Allocation Percentage of 1,739.53 Series B Preferred Shares (rounded up to the nearest thousandth of a Series B Preferred Share) (as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the Subscription Date) and (B) the number of Series B Preferred Shares held by such Holder on such Installment Date, (ii) any Deferral Amount deferred by such Holder pursuant to Section 9(d) and included in such Installment Amount

by such Holder, (iii) any accrued and unpaid dividends with respect to such Series B Preferred Shares, if any, and (iv) and accrued and unpaid Late Charges, if any, with respect to such Principal and dividends, if any, as any such Installment Amount for such Holder may be reduced pursuant to the terms hereof, whether upon conversion, redemption or otherwise. In the event a Holder shall sell or otherwise transfer or assign any portion of such Holder's Series B Preferred Shares, the transferee shall be allocated a pro rata portion of each unpaid Installment Amount hereunder.

(dd) "**Installment Balance Conversion Shares**" means, for any Installment Date, a number of shares of Common Stock equal to (i) the Post-Installment Conversion Shares for such date minus (ii) the amount of any Pre-Installment Conversion Shares delivered in respect of the applicable Installment Date. In the event that the amount of Pre-Installment Conversion Shares exceeds the Post-Installment Conversion Shares for such date (such excess, as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the delivery thereof to such Holder, the "**Installment Conversion Shares Excess**"), the Installment Balance Conversion Shares shall equal zero (0) for such date and the number of Pre-Installment Conversion Shares payable on the next Installment Pre-Payment Date shall be reduced by such Installment Conversion Shares Excess; provided that in connection with the final Installment Date, the Installment Balance Conversion Shares shall equal the actual number (whether positive or negative) obtained through the application of the formula above in this clause (z) and, if a negative number, then each Holder shall, at its sole option, either (I) forfeit the applicable number of shares of Common Stock underlying the applicable Installment Conversion Shares Excess to the Company on the Maturity Date or (II) pay to the Company cash by wire transfer of immediately available funds pursuant to the Company's written wire instruction in an amount equal to the product obtained by multiplying the applicable Installment Conversion Shares Excess and the applicable Company Installment Conversion Price with respect to the last Installment Date hereunder.

(ee) "**Installment Date**" means each of December 15, 2017, January 16, 2018, February 15, 2018, March 15, 2018, April 16, 2018, May 15, 2018, June 15, 2018, July 16, 2018 and August 15, 2018.

(ff) "**Lead Investor**" means Hudson Bay Master Fund Ltd.

(gg) "**Liquidation Event**" means the voluntary or involuntary liquidation, dissolution or winding up of the Company or such Subsidiaries the assets of which constitute all or substantially all of the assets of the business of the Company and its Subsidiaries taken as a whole, in a single transaction or series of transactions, or adoption of any plan for the same.

(hh) "**Non-Electing Holder**" means any Holder who is not an Electing Holder.

(ii) “**Option Value**” means the value of an Option based on the Black and Scholes Option Pricing model obtained from the “OV” function on Bloomberg determined as of (A) the Trading Day prior to the public announcement of the issuance of the applicable Option if the issuance of such Option is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Option if the issuance of such Option is not publicly announced, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of the applicable Option as of the applicable date of determination, (ii) an expected volatility equal to the greater of 75% and the 100 day volatility obtained from the HVT function on Bloomberg as of (A) the Trading Day immediately following the public announcement of the applicable Option if the issuance of such Option is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Option if the issuance of such Option is not publicly announced, (iii) the underlying price per share used in such calculation shall be the highest Weighted Average Price of the Common Stock during the period beginning on the Trading Day prior to the execution of definitive documentation relating to the issuance of the applicable Option and ending on (A) the Trading Day immediately following the public announcement of such issuance, if the issuance of such Option is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Option if the issuance of such Option is not publicly announced, (iv) a zero cost of borrow and (v) a 360 day annualization factor.

(jj) “**Options**” means any rights, warrants or options to subscribe for or purchase (i) shares of Common Stock or (ii) Convertible Securities.

(kk) “**Parent Entity**” of a Person means an entity that, directly or indirectly, controls the applicable Person, including such entity whose common capital or equivalent equity security is quoted or listed on an Eligible Market (or, if so elected by the Required Holders, any other market, exchange or quotation system), or, if there is more than one such Person or such entity, the Person or such entity designated by the Required Holders or in the absence of such designation, such Person or entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

(ll) “**Permitted Indebtedness**” means (i) trade payables incurred in the ordinary course of business consistent with past practice, (ii) Permitted Indebtedness set forth on Schedule 3(zz), attached to the Securities Purchase Agreement as in effect on the Subscription Date and (iii) Indebtedness secured by Permitted Liens.

(mm) “**Permitted Liens**” means (i) any Lien for taxes not yet due or delinquent or being contested in good faith by appropriate proceedings for which adequate reserves have been established in accordance with GAAP, (ii) any statutory Lien arising in the ordinary course of business by operation of law with respect to a liability that is not yet due or delinquent, (iii) any Lien created by operation of law, such as materialmen’s liens, mechanics’ liens and other similar liens, arising in the ordinary course of business with respect to a liability

that is not yet due or delinquent or that are being contested in good faith by appropriate proceedings, (iv) Liens (A) upon or in any equipment acquired or held by the Company or any of its Subsidiaries to secure the purchase price of such equipment or Indebtedness incurred solely for the purpose of financing the acquisition or lease of such equipment, or (B) existing on such equipment at the time of its acquisition, provided that the Lien is confined solely to the property so acquired and improvements thereon, and the proceeds of such equipment, (v) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clause (iv) above, provided that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the Indebtedness being extended, renewed or refinanced does not increase, (vi) leases or subleases and licenses and sublicenses granted to others in the ordinary course of the Company's business, (vii) Liens in favor of customs and revenue authorities arising as a matter of law to secure payments of custom duties in connection with the importation of goods, and (viii) Liens arising from judgments, decrees or attachments in circumstances not constituting a Triggering Event under Section 6(a)(viii).

(nn) "**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(a) "**Post-Installment Conversion Shares**" means, for any Installment Date and without taking into account the delivery of any Pre-Installment Conversion Shares, that number of shares of Common Stock equal to the applicable Company Conversion Amount on such Installment Date divided by the Company Installment Conversion Price as in effect on the applicable Installment Date, rounded up to the nearest whole share of Common Stock.

(b) "**Principal Market**" means The NASDAQ Global Market.

(c) "**Redemption Date**" means, collectively, the Triggering Event Redemption Date, the Change of Control Redemption Date, the Installment Dates, each of the foregoing, individually, a Redemption Date.

(d) "**Redemption Prices**" means, collectively, the Triggering Event Redemption Price, the Change of Control Redemption Price, the Company Installment Redemption Price, and any other redemption price set forth herein (including, in each case, any interest and damages thereon), each of the foregoing, individually, a Redemption Price.

(e) "**Redemption Notices**" means, collectively, the Notices of Redemption at Option of Holder, the Change of Control Redemption Notices and any other redemption notices set forth herein, each of the foregoing, individually, a Redemption Notice.

- (f) “**Registration Statement**” means the Company’s Registration Statement on Form S-3 (File number 333-217034).
- (g) “**Required Holders**” means the Holders representing at least a majority of the aggregate Series B Preferred Shares then outstanding.
- (h) “**SEC**” means the United States Securities and Exchange Commission.
- (i) “**Securities Act**” means the Securities Act of 1933, as amended.
- (j) “**Securities Purchase Agreement**” means the Securities Purchase Agreement, dated as of the Subscription Date, by and among the Company and the investors referred to therein.
- (k) “**Standard Settlement Period**” means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary Eligible Market with respect to the Company’s Common Stock as in effect on the date of delivery of the applicable Conversion Notice.
- (l) “**Stated Value**” means \$1,000.
- (m) “**Stockholder Approval**” shall have the meaning ascribed to such term in the Securities Purchase Agreement.
- (n) “**Subject Entity**” means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group.
- (o) “**Subscription Date**” means August 16, 2017.
- (p) “**Subsidiaries**” means any joint venture or entity in which the Company, directly or indirectly, owns capital stock or an equity or similar interest, including any subsidiaries formed or acquired after the Subscription Date.
- (q) “**Successor Entity**” means one or more Person or Persons (or, if so elected by the Required Holders, the Company or Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or one or more Person or Persons (or, if so elected by the Required Holders, the Company or the Parent Entity) with which such Fundamental Transaction shall have been entered into.
- (r) “**Trading Day**” means any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded; provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the entire final

hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time).

(s) **“Transaction Documents”** means this Certificate of Designations, the Securities Purchase Agreement and the Warrants.

(t) **“Triggering Event Conversion Price”** means, with respect to any Triggering Event Conversion, that price which shall be the lowest of (i) the Conversion Price then in effect, (ii) 75% of the lowest Weighted Average Price of the Common Stock during the twenty (20) consecutive Trading Day period ending on the Trading Day immediately preceding the date of the applicable Triggering Event Conversion (such Weighted Average Prices to be appropriately adjusted for any share dividend, share split, share combination, reclassification or similar transaction during such twenty (20) consecutive Trading Day period) and (iii) 75% of the Weighted Average Price of the Common Stock on the date of the applicable Triggering Event Conversion.

(u) **“Weighted Average Price”** means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market during the period beginning at 9:30:01 a.m., New York time (or such other time as the Principal Market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as the Principal Market publicly announces is the official close of trading), as reported by Bloomberg through its “Volume at Price” function or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30:01 a.m., New York time (or such other time as such market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as such market publicly announces is the official close of trading), as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Weighted Average Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Weighted Average Price of such security on such date shall be the fair market value as mutually determined by the Company and the applicable Holder. If the Company and such Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 5(c)(iii) with the term “Weighted Average Price” being substituted for the term “Conversion Price.” All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

(v) **“Warrants”** means the warrants to purchase Common Stock issued in connection with the Series B Preferred Shares on the Issuance Date and shall include all warrants issued in exchange therefor or replacement thereof.

* * * * *

IN WITNESS WHEREOF, the Company has caused this Certificate of Designations to be duly executed, as of the 17th day of August, 2017.

ALTIMMUNE, INC.

By: _____

Name: William Enright

Title: President and Chief Executive Officer

EXHIBIT I

ALTIMMUNE, INC.

CONVERSION NOTICE

Reference is made to the Certificate of Designations, Preferences and Rights of Series B Convertible Preferred Stock of Altimune, Inc. (the "**Certificate of Designations**"). In accordance with and pursuant to the Certificate of Designations, the undersigned hereby elects to convert the number of shares of Series B Convertible Preferred Stock, par value \$0.0001 per share (the "**Series B Preferred Shares**"), of Altimune, Inc., a Nevada corporation (the "**Company**"), indicated below into shares of Common Stock, par value \$0.0001 per share (the "**Common Stock**"), of the Company, as of the date specified below.

Date of Conversion: _____

Number of Series B Preferred Shares to be converted: _____

Stock certificate no(s). of Series B Preferred Shares to be converted: _____

Tax ID Number (If applicable): _____

Please confirm the following information: _____

Conversion Price: _____

Please check the following box if the Conversion Price is being determined by:

Triggering Event Conversion Price:

Number of shares of Common Stock to be issued: _____

Please issue the Common Stock into which the Series B Preferred Shares are being converted to the Holder, or for its benefit, as follows:

Check here if requesting delivery as a certificate to the following name and to the following address:

Issue to: _____

Address: _____

Telephone Number: _____

Check here if requesting delivery by Deposit/Withdrawal at Custodian as follows:

DTC Participant: _____

DTC Number: _____

Account Number: _____

Check here if requesting delivery by book-entry only registration through the DTC's Direct Registration System (DRS):

Issue to: _____

Address: _____

Telephone Number: _____

Authorization: _____

By: _____

Title: _____

Dated:

Account Number (if electronic book entry transfer): _____

Transaction Code Number (if electronic book entry transfer): _____

Installment Amounts to be reduced and amount of reduction: _____

[NOTE TO HOLDER — THIS FORM MUST BE SENT CONCURRENTLY TO TRANSFER AGENT]

ACKNOWLEDGMENT

The Company hereby acknowledges this Conversion Notice and hereby directs Continental Stock Transfer & Trust Company to issue the above indicated number of shares of Common Stock in accordance with the Irrevocable Transfer Agent Instructions dated August , 2017 from the Company and acknowledged and agreed to by Continental Stock Transfer & Trust Company.

ALTIMMUNE, INC.

By: _____
Name: _____
Title: _____

[FORM OF WARRANT]

ALTIMMUNE, INC.

WARRANT TO PURCHASE COMMON STOCK

Warrant No.:

Number of Shares of Common Stock:

Date of Issuance: August [], 2017 (“**Issuance Date**”)

Altimune, Inc., a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [HOLDER], the registered holder hereof or its permitted assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined below) then in effect, at any time or times on or after the Issuance Date, but not after 4:59 p.m., New York time, on the Expiration Date, (as defined below), ()¹ fully paid nonassessable shares of Common Stock, subject to adjustment as provided herein (the “**Warrant Shares**”). Except as otherwise defined herein, capitalized terms in this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, this “**Warrant**”), shall have the meanings set forth in Section 17. This Warrant is one of the Warrants to purchase Common Stock (the “**SPA Warrants**”) issued pursuant to Section 1 of that certain Securities Purchase Agreement, dated as of August 16, 2017 (the “**Subscription Date**”), by and among the Company and the investors (the “**Buyers**”) referred to therein (the “**Securities Purchase Agreement**”). Capitalized terms used herein and not otherwise defined shall have the definitions ascribed to such terms in the Securities Purchase Agreement.

1. EXERCISE OF WARRANT.

(a) Mechanics of Exercise. Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section 1(f)), this Warrant may be exercised by the Holder at any time or times on or after the Issuance Date but not after 4:59 p.m., New York time, on the Expiration Date, in whole or in part, by delivery of a written notice, in the form attached hereto as Exhibit A (the “**Exercise Notice**”), of the Holder’s election to exercise this Warrant. On or prior to the Trading Day immediately preceding the applicable Share Delivery Date (as defined below), the Holder shall either (A) pay to the Company an amount equal to the applicable Exercise Price multiplied by the number of Warrant Shares as to which this Warrant is being exercised (the “**Aggregate Exercise Price**”) in cash by wire transfer of immediately available funds or (B) notify the Company that this Warrant is being exercised pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect

¹ Insert 40% of the aggregate number of shares of Common Stock issuable to the Holder upon conversion of the Series B Preferred Shares purchased by the Holder pursuant to the Securities Purchase Agreement on the Issuance Date calculated using the initial Conversion Price set forth in the Certificate of Designations for the Series B Preferred Shares.

as cancellation of the original Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. On or before the first (1st) Trading Day following the date on which the Company has received the Exercise Notice, the Company shall transmit by electronic mail an acknowledgment of confirmation of receipt of the Exercise Notice to the Holder and the Company's transfer agent (the "**Transfer Agent**"). On or before the earlier of (i) the third (3rd) Trading Day and (ii) the number of Trading Days comprising the Standard Settlement Period, in each case, following the date on which the Holder delivers the Exercise Notice to the Company, so long as the Holder delivers the Aggregate Exercise Price (or notice of a Cashless Exercise) on or prior to the Trading Day immediately preceding the earlier of clauses (i) and (ii) above (the "**Share Delivery Date**") (provided that if the Aggregate Exercise Price has not been delivered by such date, the Share Delivery Date shall be one (1) Trading Day after the Aggregate Exercise Price (or notice of a Cashless Exercise) is delivered), the Company shall (X) provided that the Transfer Agent is participating in The Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program, credit such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with DTC through its Deposit / Withdrawal At Custodian system, or (Y) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise. The Company shall be responsible for all fees and expenses of the Transfer Agent and all fees and expenses with respect to the issuance of Warrant Shares via DTC, if any. Upon delivery of the Exercise Notice by the Holder (provided that the Holder delivers the Aggregate Exercise Price (or notice of a Cashless Exercise) to the Company on or prior to the Trading Day immediately preceding the applicable Share Delivery Date), this Warrant shall be deemed exercised, and the Holder shall be deemed for all corporate purposes to have become the holder of record of, the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares, as the case may be (provided that if the Aggregate Exercise Price (or notice of a Cashless Exercise) has not been delivered by such date, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised on the date that the Aggregate Exercise Price (or notice of a Cashless Exercise) is delivered). If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then the Company shall as soon as practicable and in no event later than three (3) Trading Days after delivery of the Aggregate Exercise Price (or notice of a Cashless Exercise) and at its own expense, issue a new Warrant (in accordance with Section 7(d)) representing the right to purchase the number of Warrant Shares issuable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional Warrant Shares are to be issued upon the exercise of this Warrant, but rather the number of Warrant Shares to be issued shall be rounded up to the nearest whole number. The Company shall pay any and all transfer or similar taxes (other than income or similar taxes) which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. The Company's obligations to issue and deliver Warrant Shares in accordance with the terms and subject to the conditions hereof are absolute and

unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination.

(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means \$2.67 per share, subject to adjustment as provided herein.

(c) Company’s Failure to Timely Deliver Securities. If the Company shall fail for any reason or for no reason to issue to the Holder on or prior to the Share Delivery Date either (I) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company’s share register or if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, to credit the Holder’s balance account with DTC, for such number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise of this Warrant or (II) if the Registration Statement on Form S-3 (File number 333-217034), or other applicable effective registration statement under the 1933 Act (the “**Registration Statement**”) covering the issuance of the Warrant Shares that are the subject of the Exercise Notice (the “**Unavailable Warrant Shares**”) is not available for the issuance of such Unavailable Warrant Shares and the Company fails to promptly (x) so notify the Holder and (y) deliver the Warrant Shares electronically without any restrictive legend by crediting such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system (the event described in the immediately foregoing clause (II) is hereinafter referred to as a “**Notice Failure**” and together with the event described in clause (I) above, an “**Exercise Failure**”), then, in addition to all other remedies available to the Holder, (X) the Company shall pay in cash to the Holder on the day after the Share Delivery Date, and on each thirtieth (30th) day thereafter (prorated for periods totaling less than thirty (30) days) during which such Exercise Failure remains uncured, an amount equal to 0.5% of the product of (A) the sum of the number of shares of Common Stock not issued to the Holder on or prior to the Share Delivery Date and to which the Holder is entitled, and (B) the arithmetic average of the Weighted Average Prices of the Common Stock on each Trading Day during the period beginning on the applicable date of delivery of an Exercise Notice and ending on the applicable Share Delivery Date, and (Y) the Holder, upon written notice to the Company, may void its Exercise Notice with respect to, and retain or have returned, as the case may be, any portion of this Warrant that has not been exercised pursuant to such Exercise Notice; provided that the voiding of an Exercise Notice shall not affect the Company’s obligations to make any payments which have accrued prior to the date of such notice pursuant to this Section 1(c) or otherwise. In addition to the foregoing, if on or prior to the Share Delivery Date either (I) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, the Company shall fail to issue and deliver a certificate to the Holder and register such shares of Common Stock on the Company’s share register or, if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, fail to credit the Holder’s balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the

Holder's exercise hereunder or pursuant to the Company's obligation pursuant to clause (ii) below or (II) a Notice Failure occurs, and if on or after such Trading Day (but prior to the Company remedying any such failure), the Holder purchases (in an open market transaction or otherwise) shares of Common Stock relating to the applicable Exercise Failure (a "**Buy-In**"), then the Company shall, within three (3) Trading Days after the Holder's request and in the Holder's discretion, pay cash to the Holder in an amount equal to the Holder's total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (such number of shares not to exceed the number of Warrants Shares failed to be delivered) (the "**Buy-In Price**"), at which point the Company's obligation to deliver such certificate (and to issue such shares of Common Stock) or credit the Holder's balance account with DTC for such shares of Common Stock shall terminate. For the avoidance of doubt, to the extent that the Company makes a payment contemplated by the foregoing sentence, then the number of Warrant Shares issuable upon exercise of this Warrant shall be reduced by the number of Warrant Shares that were not delivered and for which the payment was so made. Nothing shall limit the Holder's right to pursue any other remedies available to it hereunder, at law or in equity, including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing shares of Common Stock (or to electronically deliver such shares of Common Stock) upon the exercise of this Warrant as required pursuant to the terms hereof.

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary, the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the "Net Number" of shares of Common Stock determined according to the following formula (a "**Cashless Exercise**"):

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{D}$$

For purposes of the foregoing formula:

- A= the total number of shares with respect to which this Warrant is then being exercised.
- B= the arithmetic average of the Closing Sale Prices of the Common Stock for the five (5) consecutive Trading Days ending on the date immediately preceding the date of the Exercise Notice.
- C= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.
- D= the Closing Sale Price of the Common Stock on the date of the Exercise Notice.

If shares of Common Stock are issued pursuant to this Section 1(d), the parties acknowledge and agree that in accordance with Section 3(a)(9) of the 1933 Act, such shares of Common Stock shall take on the registered characteristics of this Warrant, and the holding period of this Warrant may be tacked on to the holding period of such shares of Common Stock. The Company agrees not to take any position contrary to this Section 1(d).

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed and resolve such dispute in accordance with Section 12.

(f) Limitations on Exercises.

(i) Beneficial Ownership. [Notwithstanding anything to the contrary contained herein, the Company shall not effect the exercise of any portion of this Warrant, and the Holder shall not have the right to exercise any portion of this Warrant, pursuant to the terms and conditions of this Warrant and any such exercise shall be null and void and treated as if never made, to the extent that after giving effect to such exercise, the Holder together with the other Attribution Parties collectively would beneficially own in excess of 9.99% (the “**Maximum Percentage**”) of the number of shares of Common Stock outstanding immediately after giving effect to such exercise.]² [Notwithstanding anything to the contrary contained herein, at any time prior to the time the Company obtains Stockholder Approval (as defined in the Securities Purchase Agreement), the Company shall not effect the exercise of any portion of this Warrant, and the Holder shall not have the right to exercise any portion of this Warrant, pursuant to the terms and conditions of this Warrant, and any such exercise shall be null and void and treated as if never made, to the extent that after giving effect to such exercise, the Holder together with the other Attribution Parties collectively would beneficially own in excess of 19.99% (the “**Maximum Percentage**”) of the number of shares of Common Stock outstanding immediately after giving effect to such exercise.]³ For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by the Holder and the other Attribution Parties shall include the number of shares of Common Stock held by the Holder and all other Attribution Parties plus the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (A) exercise of the remaining, unexercised portion of this Warrant beneficially owned by the Holder or any of the other Attribution Parties and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company (including, without limitation, any convertible notes or convertible preferred stock or warrants, including the other SPA Warrants) beneficially owned by the Holder or any other Attribution Party subject to a limitation on conversion or exercise analogous to the limitation contained in this Section 1(f)(i). For purposes of this Section 1(f)(i), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the “**1934 Act**”). For purposes of this Warrant, in determining the number of outstanding shares of Common

² NTD: To only be included in Warrant of Buyer electing to be subject to the 9.99% Maximum Percentage, as set forth opposite such Buyer’s name in the Schedule of Buyers attached to the Securities Purchase Agreement.

³ NTD: To only be included in Warrant of all Buyers who have not elected to be subject to a 9.99% Maximum Percentage, as set forth opposite such Buyer’s name in the Schedule of Buyers attached to the Securities Purchase Agreement.

Stock the Holder may acquire upon the exercise of this Warrant without exceeding the Maximum Percentage, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company's most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission (the "SEC"), as the case may be, (y) a more recent public announcement by the Company or (3) any other written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding (the "**Reported Outstanding Share Number**"). If the Company receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder's beneficial ownership, as determined pursuant to this Section 1(f)(i), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be purchased pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the "**Reduction Shares**") and (ii) as soon as reasonably practicable, the Company shall return to the Holder any exercise price paid by the Holder for the Reduction Shares. For any reason at any time, upon the written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and any other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of shares of Common Stock to the Holder upon exercise of this Warrant results in the Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the 1934 Act), the number of shares so issued by which the Holder's and the other Attribution Parties' aggregate beneficial ownership exceeds the Maximum Percentage (the "**Excess Shares**") shall be deemed null and void and shall be cancelled ab initio, and the Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Company shall return to the Holder the exercise price paid by the Holder for the Excess Shares. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(f)(i) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 1(f)(i) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of this Warrant.

(ii) Principal Market Regulation. The Company shall not be obligated to issue any shares of Common Stock upon exercise of this Warrant and the Holder shall not have the right to receive upon exercise of this Warrant any shares of Common Stock, to the extent the issuance of such shares of Common Stock, combined with all shares of Common Stock previously issued pursuant to the terms of the Series B Preferred Shares, would exceed 3,084,581 shares of Common Stock (as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the Subscription Date) (the “**Exchange Cap**”), except that such limitation shall not apply in the event that the Company obtains the approval of its shareholders as required by the applicable rules of the Principal Market for issuances of Common Stock in excess of such amount. Until such approval, no Holder shall be issued in the aggregate, upon exercise of any SPA Warrants, shares of Common Stock in an amount greater than the product of the Exchange Cap multiplied by a fraction, the numerator of which is the total number of shares of Common Stock underlying the SPA Warrants issued to such Holder pursuant to the Securities Purchase Agreement on the Issuance Date and the denominator of which is the aggregate number of shares of Common Stock underlying the SPA Warrants issued to the Buyers pursuant to the Securities Purchase Agreement on the Issuance Date (with respect to each Holder, the “**Exchange Cap Allocation**”). In the event that any Holder shall sell or otherwise transfer any of the Holder’s SPA Warrants, such transferee shall be allocated a pro rata portion of such Holder’s Exchange Cap Allocation, and the restrictions of the prior sentence shall apply to such transferee with respect to the portion of the Exchange Cap Allocation allocated to such transferee. In the event that any holder of SPA Warrants shall exercise all of such holder’s SPA Warrants into a number of shares of Common Stock which, in the aggregate, is less than such holder’s Exchange Cap Allocation, then the difference between such holder’s Exchange Cap Allocation and the number of shares of Common Stock actually issued to such holder shall be allocated to the respective Exchange Cap Allocations of the remaining holders of SPA Warrants on a pro rata basis in proportion to the number of shares of Common Stock underlying the SPA Warrants then held by each such holder. In the event that the Company is prohibited from issuing any Warrant Shares for which an Exercise Notice has been received after October 31, 2017 as a result of the operation of this Section 1(f)(ii), then unless the Holder elects to void such exercise, the Holder may require the Company to pay to the Holder within three (3) Trading Days of the applicable attempted exercise, cash by wire transfer of immediately available funds pursuant to written wire instructions delivered by the Holder to the Company in an amount equal to the product of (i) the quotient determined by dividing (x) the number of Warrant Shares that the Company is unable to deliver pursuant to this Section 1(f)(ii), by (y) the total number of Warrant Shares issuable upon exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant) and (ii) the Black Scholes Value; provided, that (x) references to “the day immediately following the public announcement of the

applicable Fundamental Transaction” in the definition of “Black Scholes Value” shall instead refer to “the date the Holder exercises this Warrant and the Company cannot deliver the required number of Warrant Shares because of the Exchange Cap” and (y) clause (iii) of the definition of “Black Scholes Value” shall instead refer to “the underlying price per share used in such calculation shall be the highest Weighted Average Price during the period beginning on the date of the applicable date of exercise and the date that the Company makes the applicable cash payment.”

(g) **Insufficient Authorized Shares.** If at any time while this Warrant remains outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance upon exercise of this Warrant at least a number of shares of Common Stock equal to 150% of the number of shares of Common Stock as shall from time to time be necessary to effect the exercise of all of this Warrant then outstanding (the “**Required Reserve Amount**” and the failure to have such sufficient number of authorized and unreserved shares of Common Stock, an “**Authorized Share Failure**”), then the Company shall promptly take all action necessary to increase the Company’s authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for this Warrant then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than ninety (90) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its reasonable best efforts to solicit its stockholders’ approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the stockholders that they approve such proposal. Notwithstanding the foregoing, if at any such time of an Authorized Share Failure, the Company is able to obtain the written consent of a majority of the shares of its issued and outstanding shares of Common Stock to approve the increase in the number of authorized shares of Common Stock, the Company may satisfy this obligation by obtaining such consent and submitting for filing with the SEC an Information Statement on Schedule 14C. In the event that upon any exercise of this Warrant, the Company does not have sufficient authorized shares to deliver in satisfaction of such exercise, then unless the Holder elects to void such attempted exercise, the Holder may require the Company to pay to the Holder within three (3) Trading Days of the applicable exercise, cash in an amount equal to the product of (i) the quotient determined by dividing (x) the number of Warrant Shares that the Company is unable to deliver pursuant to this Section 1(g), by (y) the total number of Warrant Shares issuable upon exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant) and (ii) the Black Scholes Value; provided, that (x) references to “the day immediately following the public announcement of the applicable Fundamental Transaction” in the definition of “Black Scholes Value” shall instead refer to “the date the Holder exercises this Warrant and the Company cannot deliver the required number of Warrant Shares because of an Authorized Share Failure” and (y) clause (iii) of the definition of “Black Scholes Value” shall instead refer to “the underlying price per share used in such calculation shall be the highest Weighted Average Price during the period beginning on the date of the applicable date of exercise and the date that the Company makes the applicable cash payment.” For the avoidance of doubt, to the extent the Company makes a payment contemplated by the foregoing sentence, then the number of Warrant Shares issuable upon exercise of this Warrant shall be reduced by the number of Warrant Shares that were not delivered and for which the payment was so made.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and the number of Warrant Shares shall be adjusted from time to time as follows:

(a) Adjustment Upon Issuance of Shares of Common Stock. If and whenever on or after the Subscription Date, the Company issues or sells, or in accordance with this Section 2(a) is deemed to have issued or sold, any shares of Common Stock (including the issuance or sale of shares of Common Stock owned or held by or for the account of the Company, but excluding shares of Common Stock deemed to have been issued or sold by the Company in connection with any Excluded Securities, for a consideration per share (the “**New Issuance Price**”) less than a price (the “**Applicable Price**”) equal to the Exercise Price in effect immediately prior to such issue or sale or deemed issuance or sale (the foregoing a “**Dilutive Issuance**”), then immediately after such Dilutive Issuance, the Exercise Price then in effect shall be reduced to an amount equal to the New Issuance Price. Upon each such adjustment of the Exercise Price hereunder, the number of Warrant Shares issuable immediately prior to such Dilutive Issuance shall be adjusted to the number of shares of Common Stock determined by multiplying the Exercise Price then in effect immediately prior to such adjustment by the number of Warrant Shares acquirable upon exercise of this Warrant immediately prior to such adjustment and dividing the product thereof by the Exercise Price resulting from such adjustment. For purposes of determining the adjusted Exercise Price under this Section 2(a), the following shall be applicable:

(i) Issuance of Options. If the Company in any manner grants or sells any Options and the lowest price per share for which one share of Common Stock is issuable upon the exercise of any such Option or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the granting or sale of such Option for such price per share. For purposes of this Section 2(a)(i), the “lowest price per share for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option” shall be equal to the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to any one share of Common Stock upon the granting or sale of the Option, upon exercise of the Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option less any consideration paid or payable by the Company with respect to such one share of Common Stock upon the granting or sale of such Option, upon exercise of such Option and upon conversion exercise or exchange of any Convertible Security issuable upon exercise of such Option. No further adjustment of the Exercise Price or number of Warrant Shares shall be made upon the actual issuance of such shares of Common Stock or of such Convertible Securities upon the exercise of such Options or upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities.

(ii) Issuance of Convertible Securities. If the Company in any manner issues or sells any Convertible Securities and the lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the issuance or sale of such Convertible Securities for such price per share. For the purposes of this Section 2(a)(ii), the “lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof” shall be equal to the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to any one share of Common Stock upon the issuance or sale of the Convertible Security and upon conversion, exercise or exchange of such Convertible Security less any consideration paid or payable by the Company with respect to such one share of Common Stock upon the issuance or sale of such Convertible Security and upon conversion, exercise or exchange of such Convertible Security. No further adjustment of the Exercise Price or number of Warrant Shares shall be made upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities, and if any such issue or sale of such Convertible Securities is made upon exercise of any Options for which adjustment of this Warrant has been or is to be made pursuant to other provisions of this Section 2(a), no further adjustment of the Exercise Price or number of Warrant Shares shall be made by reason of such issue or sale.

(iii) Change in Option Price or Rate of Conversion. If the purchase price provided for in any Options, the additional consideration, if any, payable upon the issue, conversion, exercise or exchange of any Convertible Securities, or the rate at which any Convertible Securities are convertible into or exercisable or exchangeable for shares of Common Stock increases or decreases at any time, the Exercise Price and the number of Warrant Shares in effect at the time of such increase or decrease shall be adjusted to the Exercise Price and the number of Warrant Shares, which would have been in effect at such time had such Options or Convertible Securities provided for such increased or decreased purchase price, additional consideration or increased or decreased conversion rate, as the case may be, at the time initially granted, issued or sold. For purposes of this Section 2(a)(iii), if the terms of any Option or Convertible Security that was outstanding as of the Subscription Date are increased or decreased in the manner described in the immediately preceding sentence, then such Option or Convertible Security and the shares of Common Stock deemed issuable upon exercise, conversion or exchange thereof shall be deemed to have been issued as of the date of such increase or decrease. No adjustment pursuant to this Section 2(a) shall be made if such adjustment would result in an increase of the Exercise Price then in effect or a decrease in the number of Warrant Shares.

(iv) Calculation of Consideration Received. In case any Option is issued in connection with the issue or sale of other securities of the Company, together comprising one integrated transaction, (x) the Options will be deemed to have been issued for the Option Value of such Options and (y) the other securities issued or sold in such integrated transaction shall be deemed to have been issued or sold for the difference of (I) the aggregate consideration received by the Company less any consideration paid or payable by the Company pursuant to the terms of such other securities of the Company, less (II) the Option Value. If any shares of Common Stock, Options or Convertible

Securities are issued or sold or deemed to have been issued or sold for cash, the consideration other than cash received therefor will be deemed to be the net amount received by the Company therefor. If any shares of Common Stock, Options or Convertible Securities are issued or sold for a consideration other than cash, the amount of such consideration received by the Company will be the fair value of such consideration, except where such consideration consists of publicly traded securities, in which case the amount of consideration received by the Company will be the Closing Sale Price of such publicly traded securities on the date of receipt. If any shares of Common Stock, Options or Convertible Securities are issued to the owners of the non-surviving entity in connection with any merger in which the Company is the surviving entity, the amount of consideration therefor will be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such shares of Common Stock, Options or Convertible Securities, as the case may be. The fair value of any consideration other than cash or publicly traded securities will be determined jointly by the Company and the Required Holders. If such parties are unable to reach agreement within ten (10) days after the occurrence of an event requiring valuation (the "**Valuation Event**"), the fair value of such consideration will be determined within five (5) Business Days after the tenth (10th) day following the Valuation Event by an independent, reputable appraiser selected by the Company with the consent of the Required Holders (such consent not to be unreasonably conditioned, withheld or delayed). The determination of such appraiser shall be final and binding upon all parties absent manifest error and, absent bad faith by the Required Holders, the fees and expenses of such appraiser shall be borne by the Company.

(v) Record Date. If the Company takes a record of the holders of shares of Common Stock for the purpose of entitling them (A) to receive a dividend or other distribution payable in shares of Common Stock, Options or in Convertible Securities or (B) to subscribe for or purchase shares of Common Stock, Options or Convertible Securities, then such record date will be deemed to be the date of the issue or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase, as the case may be.

(vi) No Readjustments. For the avoidance of doubt, in the event the Exercise Price has been adjusted pursuant to this Section 2(a) and the Dilutive Issuance that triggered such adjustment does not occur, is not consummated, is unwound or is cancelled after the facts for any reason whatsoever, in no event shall the Exercise Price be readjusted to the Exercise Price that would have been in effect if such Dilutive Issuance had not occurred or been consummated.

(b) Voluntary Adjustment By Company. The Company may at any time during the term of this Warrant, with the prior written consent of the Required Holders, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the Board of Directors of the Company.

(c) Adjustment Upon Subdivision or Combination of Common Stock. If the Company at any time on or after the Subscription Date subdivides (by any stock split, stock

dividend, recapitalization or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time on or after the Subscription Date combines (by combination, reverse stock split or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 2(c) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(d) Other Events. If any event occurs of the type contemplated by the provisions of this Section 2 but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, phantom stock rights or other rights with equity features), then the Company's Board of Directors will make an appropriate adjustment in the Exercise Price and the number of Warrant Shares, as mutually determined by the Company's Board of Directors and the Required Holders, so as to protect the rights of the Holder; provided that no such adjustment pursuant to this Section 2(d) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2.

3. RIGHTS UPON DISTRIBUTION OF ASSETS. If the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction, but not including an event that results in an adjustment to the Exercise Price and the number of Warrant Shares pursuant to Section 2(c)) (a "**Distribution**"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that to the extent that the Holder's right to participate in any such Distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Distribution to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

4. PURCHASE RIGHTS; FUNDAMENTAL TRANSACTIONS.

(a) Purchase Rights. In addition to any adjustments pursuant to Section 2 above, if at any time the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the "**Purchase Rights**"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right held similarly in abeyance) to the same extent as if there had been no such limitation).

(b) Fundamental Transactions. In the event of a Fundamental Transaction, the Company (or the Successor Entity) shall purchase this Warrant from the Holder by paying to the Holder, within five (5) Business Days after the effective date of the Fundamental Transaction, cash in an amount equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the date of such Fundamental Transaction.

5. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its Certificate of Incorporation or Bylaws, or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and will at all times in good faith carry out all of the provisions of this Warrant and take all action as may be required to protect the rights of the Holder. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long as any of the SPA Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the SPA Warrants, 150% of the number of shares of Common Stock as shall from time to time be necessary to effect the exercise of the SPA Warrants then outstanding (without regard to any limitations on exercise).

6. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 6, the Company shall provide the Holder with copies of the same notices and other information given to the stockholders of the Company generally, contemporaneously with the giving thereof to the stockholders.

7. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 7(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 7(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary form and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 7(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 7(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, that no SPA Warrants for fractional Warrant Shares shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the

right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 7(a) or Section 7(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

8. NOTICES. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in accordance with Section 9(f) of the Securities Purchase Agreement. The Company will give written notice to the Holder (i) promptly upon any adjustment of the Exercise Price, setting forth in reasonable detail, and certifying, the calculation of such adjustment; (ii) at least five (5) Business Days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, (B) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation; or (C) with respect to any grants, issuances or sales of any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property to holders of shares of Common Stock. Notwithstanding the foregoing clause (C), the Company shall give written notice to the Holder of any grants, issuances or sales of any Excluded Securities by no later than four (4) Business days of such grant, issuance or sale.

9. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant may be amended or waived and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

10. GOVERNING LAW; JURISDICTION; JURY TRIAL. This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. Each of the Company and the Holder hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each of the Company and the Holder hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to the Company at the address set forth in Section 9(f) of the Securities Purchase Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude the Company or the Holder from bringing suit or taking other legal action in any other jurisdiction to collect on

any obligations hereunder, to realize on any collateral or any other security for such obligations, or to enforce a judgment or other court ruling in favor of such party. **EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

11. **CONSTRUCTION; HEADINGS.** This Warrant shall be deemed to be jointly drafted by the Company and all the Buyers and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

12. **DISPUTE RESOLUTION.** In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall submit the disputed determinations or arithmetic calculations via electronic mail within two (2) Business Days of receipt of the Exercise Notice giving rise to such dispute, as the case may be, to the Holder. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price or the Warrant Shares within three (3) Business Days of such disputed determination or arithmetic calculation being submitted to the Holder, then the Company shall, within two (2) Business Days submit via electronic mail (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Company and approved by the Holder (such consent not to be unreasonably withheld, conditioned or delayed) or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten (10) Business Days from the time it receives the disputed determinations or calculations. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error. Absent bad faith by the Holder, the expenses of the investment bank or accountant shall be borne by the Company.

13. **REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF.** The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant and the other Transaction Documents, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required.

14. **TRANSFER.** This Warrant and the Warrant Shares may be offered for sale, sold, transferred, pledged or assigned without the consent of the Company.

15. **SEVERABILITY.** If any provision of this Warrant is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Warrant so long as this Warrant as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

16. **DISCLOSURE.** Upon receipt or delivery by the Company of any notice in accordance with the terms of this Warrant, unless the Company has in good faith determined that the matters relating to such notice do not constitute material, nonpublic information relating to the Company or its Subsidiaries (as defined in the Securities Purchase Agreement), the Company shall within two (2) Business Days after any such receipt or delivery publicly disclose such material, nonpublic information on a Current Report on Form 8-K or otherwise; provided, however, that if any provision of any Transaction Document provides otherwise with respect to the receipt or delivery of a particular notice, such provision shall govern the timing and manner of any such disclosure; provided, further, that, solely in the case of grants, issuances or sales of any Excluded Securities, such two (2) Business Days shall be replaced with four (4) Business Days. In the event that the Company believes that a notice contains material, nonpublic information relating to the Company or its Subsidiaries, the Company so shall indicate to the Holder contemporaneously with delivery of such notice, and in the absence of any such indication, the Holder shall be allowed to presume that all matters relating to such notice do not constitute material, nonpublic information relating to the Company or its Subsidiaries. For purposes of this Section 16, public disclosure of any information by a stockholder of the Company (including any filing pursuant to Section 13 or Section 16 of the 1934 Act) shall satisfy the requirement that such information be publicly disclosed by the Company.

17. **CERTAIN DEFINITIONS.** For purposes of this Warrant, the following terms shall have the following meanings:

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

(b) “**Affiliate**” means, with respect to any Person, any other Person that directly or indirectly controls, is controlled by, or is under common control with, such Person, it being understood for purposes of this definition that “control” of a Person means the power directly or indirectly either to vote 10% or more of the stock having ordinary voting power for the election of directors of such Person or direct or cause the direction of the management and policies of such Person whether by contract or otherwise.

(c) “**Approved Stock Plan**” means any employee benefit plan which has been approved by the Board of Directors of the Company, pursuant to which the Company’s securities may be issued to any employee, officer, director or consultant for services provided to the Company.

(d) **“Attribution Parties”** means, collectively, the following Persons and entities: (i) any investment vehicle, including, any funds, feeder funds or managed accounts, currently, or from time to time after the Issuance Date, directly or indirectly managed or advised by the Holder’s investment manager or any of its Affiliates or principals, (ii) any direct or indirect Affiliates of the Holder or any of the foregoing, (iii) any Person acting or who could be deemed to be acting as a Group together with the Holder or any of the foregoing and (iv) any other Persons whose beneficial ownership of the Company’s Common Stock would or could be aggregated with the Holder’s and the other Attribution Parties for purposes of Section 13(d) of the 1934 Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Maximum Percentage.

(e) **“Black Scholes Value”** means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the “OV” function on Bloomberg determined as of the day immediately following the public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (ii) an expected volatility equal to the greater of 75% and the 100 day volatility obtained from the HVT function on Bloomberg as of the day immediately following the public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, (iii) the underlying price per share used in such calculation shall be the greater of (x) the highest Weighted Average Price of the Common Stock during the period beginning on the Trading Day prior to the execution of definitive documentation relating to the applicable Fundamental Transaction and ending on (A) the Trading Day immediately following the public announcement of such Fundamental Transaction, if the applicable Fundamental Transaction is publicly announced or (B) the Trading Day immediately following the consummation of the applicable Fundamental Transaction if the applicable Fundamental Transaction is not publicly announced and (y) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in the Fundamental Transaction, (iv) a zero cost of borrow and (v) a 360 day annualization factor.

(f) **“Bloomberg”** means Bloomberg Financial Markets.

(g) **“Business Day”** means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

(h) **“Certificate of Designations”** means the certificate of designations for the Series B Preferred Shares in the form attached as Exhibit A to the Securities Purchase Agreement.

(i) **“Closing Bid Price”** and **“Closing Sale Price”** means, for any security as of any date, the last closing bid price and last closing trade price, respectively, for such

security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing bid price or the closing trade price, as the case may be, then the last bid price or the last trade price, respectively, of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last closing bid price or last trade price, respectively, of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not apply, the last closing bid price or last trade price, respectively, of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no closing bid price or last trade price, respectively, is reported for such security by Bloomberg, the average of the bid prices, or the ask prices, respectively, of any market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Closing Bid Price or the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Bid Price or the Closing Sale Price, as the case may be, of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 12. All such determinations to be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

(j) “**Common Stock**” means (i) the Company’s shares of common stock, par value \$0.0001 per share, and (ii) any share capital into which such Common Stock shall have been changed or any share capital resulting from a reorganization, recapitalization or reclassification of such Common Stock.

(k) “**Convertible Securities**” means any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(l) “**Eligible Market**” means the Principal Market, the NYSE MKT LLC, The NASDAQ Global Select Market, The NASDAQ Capital Market or The New York Stock Exchange, Inc.

(m) “**Excluded Securities**” means any Common Stock issued or issuable: (i) in connection with any Approved Stock Plan, (ii) upon exercise of the SPA Warrants; provided, that the terms of such SPA Warrants are not amended, modified or changed on or after the Subscription Date, (iii) pursuant to the terms of the Certificate of Designations; provided, that the terms of the Certificate of Designations are not amended, modified or changed on or after the Subscription Date, (iv) upon exercise of any Options or Convertible Securities which are outstanding on the day immediately preceding the Subscription Date; provided, that the terms of such Options or Convertible Securities are not amended, modified or changed on or after the Subscription Date, (v) in connection with obtaining commercially reasonable, arms-length debt financing from any bank, financial institution or institutional lender approved by the Board of Directors of the Company in good faith, (vi) in connection with any acquisitions (whether by merger, consolidation, purchase of equity, purchase of assets, reorganization or otherwise), mergers, consolidations, reorganizations or similar transactions by Company or any of its

Subsidiaries the terms of which are approved by a majority of the disinterested directors of the Company, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities, (vii) in connection with (a) joint venture, licensing or development activities, (b) distribution, supply or manufacture of the Company's products or services or (c) any other arrangements involving business partners of the Company that, in each case, are approved by a majority of the disinterested directors of the Company, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities, (viii) in connection with the sale of securities to Key Group Development, or an affiliate thereof, with an aggregate purchase price not to exceed \$1,000,000, or (ix) with respect to shares of the Company's Series A Junior Participating Preferred Stock issued or issuable pursuant to the Company's poison pill or rights plan then in effect; provided, that any Common Stock issued or issuable (or deemed to be issued in accordance with Section 2(d)) by the Company to consultants pursuant to the foregoing clause (i) and/or pursuant to the foregoing clauses (v), (vi) and/or (vii), which, when combined with all Common Stock issued or issuable (or deemed to be issued in accordance with Section 2(a)) by the Company previously issued to consultants pursuant to the foregoing clause (i) and/or pursuant to the foregoing clauses (v), (vi) and/or (vi), exceeds (1) at any time prior to the date that is the later of (I) the second (2nd) anniversary of the Subscription Date and (II) the date no Series B Preferred Shares are outstanding, 600,000 shares of Common Stock (as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction occurring after the Subscription Date) and (2) at any time thereafter, 5% of the aggregate number of shares of Common Stock outstanding on the date of such issuance, shall not constitute Excluded Securities hereunder.

(n) "**Expiration Date**" means the date sixty (60) months after the Issuance Date or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a "**Holiday**"), the next day that is not a Holiday.

(o) "**Fundamental Transaction**" means (A) that the Company shall, directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Subject Entity, or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company and its "significant subsidiaries" (as defined in Rule 1-02 of Regulation S-X), taken as a whole, to one or more Subject Entities, or (iii) make, or allow one or more Subject Entities to make, or allow the Company to be subject to or have its Common Stock be subject to or party to one or more Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least either (x) 50% of the outstanding shares of Common Stock, (y) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding; or (z) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (iv) consummate a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby all such Subject Entities,

individually or in the aggregate, acquire, either (x) at least 50% of the outstanding shares of Common Stock, (y) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (z) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, (B) that the Company shall, directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, allow any Subject Entity individually or the Subject Entities in the aggregate to be or become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reorganization, recapitalization or reclassification or otherwise in any manner whatsoever, of either (x) at least 50% of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock, (y) at least 50% of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock not held by all such Subject Entities as of the Subscription Date calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (z) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other stockholders of the Company to surrender their shares of Common Stock without approval of the stockholders of the Company or (C) directly or indirectly, including through Subsidiaries, Affiliates or otherwise, in one or more related transactions, the issuance of or the entering into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this definition in which case this definition shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this definition to the extent necessary to correct this definition or any portion of this definition which may be defective or inconsistent with the intended treatment of such instrument or transaction; provided, however, that, notwithstanding any of the foregoing, one or more bona fide transactions the primary purpose of which is to raise capital shall not constitute a Fundamental Transaction; provided, further, that no Subject Entity party to such bona fide transaction acquires either (1) 50% or more of the outstanding shares of Common Stock, or (2) beneficial ownership (as defined in Rule 13d-3 under the Exchange Act) of 50% or more of the outstanding shares of Common Stock.

(p) “**Group**” means a “group” as that term is used in Section 13(d) of the 1934 Act and as defined in Rule 13d-5 thereunder.

(q) “**Lead Investor**” means Hudson Bay Master Fund Ltd.

(r) “**Option Value**” means the value of an Option calculated using the greater of the Black-Scholes Option Pricing Model obtained from the “OV” function on Bloomberg, as a put option or a call option, determined as of (A) the Trading Day prior to the public announcement of the issuance of the applicable Option, if the issuance of such Option is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Option if the issuance of such Option is not publicly announced, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of the applicable Option as of the applicable date of determination, (ii) an expected volatility equal to the greater of 75% and the 100 day volatility obtained from the HVT function on Bloomberg as of (A) the Trading Day immediately following the public

announcement of the applicable Option if the issuance of such Option is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Option if the issuance of such Option is not publicly announced, (iii) the underlying price per share used in such calculation shall be the highest Weighted Average Price of the Common Stock during the period beginning on the Trading Day prior to the execution of definitive documentation relating to the issuance of the applicable Option and ending on (A) the Trading Day immediately following the public announcement of such issuance, if the issuance of such Option is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Option if the issuance of such Option is not publicly announced, (iv) a zero cost of borrow and (v) a 360 day annualization factor.

(s) “**Options**” means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(t) “**Parent Entity**” of a Person means an entity that, directly or indirectly, controls the applicable Person, including such entity whose common stock or common shares or equivalent equity security is quoted or listed on an Eligible Market (or, if so elected by the Required Holders, any other market, exchange or quotation system), or, if there is more than one such Person or such entity, the Person or such entity designated by the Required Holders or in the absence of such designation, such Person or entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

(u) “**Person**” means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(v) “**Principal Market**” means The NASDAQ Global Market.

(w) “**Required Holders**” means the holders of the SPA Warrants representing at least a majority of the shares of Common Stock underlying the SPA Warrants then outstanding.

(x) “**Series B Preferred Shares**” shall have the meaning ascribed to such term in the Securities Purchase Agreement.

(y) “**Standard Settlement Period**” means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary Eligible Market with respect to the Common Stock as in effect on the date of delivery of the applicable Exercise Notice.

(z) “**Subject Entity**” means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group.

(aa) “**Successor Entity**” means one or more Person or Persons (or, if so elected by the Holder, the Company or Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or one or more Person or Persons (or, if so elected by the Holder, the Company or the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(bb) **“Trading Day”** means any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded; provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the entire final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time).

(cc) **“Weighted Average Price”** means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market during the period beginning at 9:30:01 a.m., New York time (or such other time as the Principal Market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as the Principal Market publicly announces is the official close of trading), as reported by Bloomberg through its “Volume at Price” function or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30:01 a.m., New York time (or such other time as such market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as such market publicly announces is the official close of trading), as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Weighted Average Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Weighted Average Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 12 with the term “Weighted Average Price” being substituted for the term “Exercise Price.” All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

ALTIMMUNE, INC.

By: _____

Name: _____

Title:

EXERCISE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS
WARRANT TO PURCHASE COMMON STOCK

ALTIMMUNE, INC.

The undersigned holder hereby exercises the right to purchase _____ shares of Common Stock (“**Warrant Shares**”) of Altimune, Inc., a Delaware corporation (the “**Company**”), evidenced by the attached Warrant to Purchase Common Stock (the “**Warrant**”). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

a “Cash Exercise” with respect to _____ Warrant Shares; and/or

a “Cashless Exercise” with respect to _____ Warrant Shares.

2. Payment of Exercise Price. In the event that the holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the holder shall pay the Aggregate Exercise Price in the sum of \$ _____ to the Company in accordance with the terms of the Warrant.

3. Delivery of Warrant Shares. The Company shall deliver to the holder _____ Warrant Shares in accordance with the terms of the Warrant.

Date: _____,

Name of Registered Holder

By: _____

Name:

Title:

ACKNOWLEDGMENT

The Company hereby acknowledges this Exercise Notice and hereby directs Continental Stock Transfer & Trust Company to issue the above indicated number of shares of Common Stock in accordance with the Transfer Agent Instructions dated August , 2017 from the Company and acknowledged and agreed to by Continental Stock Transfer & Trust Company.

ALTIMMUNE, INC.

By: _____

Name: _____

Title:



Altimune Announces \$14.7 Million Series B Preferred Stock Offering

GAITHERSBURG, MD, August 17, 2017 — Altimune, Inc. (Nasdaq: ALT), a clinical-stage immunotherapeutics company, today announced it has entered into a definitive securities purchase agreement with new and existing investors to sell an aggregate of 15,656 shares of Series B convertible preferred stock and warrants. The gross proceeds to the Company are expected to be approximately \$14.7 million, before the receipt of proceeds from the exercise of the warrants, if any, and prior to deducting placement agent fees and other expenses associated with the offering. The Company expects the offering to close on or about August 21, 2017, subject to customary closing conditions.

The preferred stock is being issued with a stated value of \$1,000 per share and a 6% original issue discount. The warrants will be initially exercisable into an aggregate of 2,345,427, shares of common stock at an exercise price of \$2.67 per share, and will be exercisable either for cash or on a net exercise basis, at the option of the holder. The warrants will be immediately exercisable and will expire on August 15, 2022.

The Company has agreed to redeem the preferred stock at the then stated value in nine equal monthly installments beginning on December 15, 2017 and on the 15th day of each of the eight subsequent months thereafter, subject to certain adjustments and exceptions. Subject to the satisfaction of customary equity conditions, the redemption payments will be in cash or stock, or any combination of the foregoing, at the option of the Company. In the event such equity conditions are not satisfied or waived, then the Company will be required to redeem the preferred stock for cash.

Altimune intends to use the net proceeds from this financing for the continued advancement of development activities for the Company's clinical-stage product pipeline, general corporate purposes, and strategic growth opportunities.

The investors in the offering include Novartis US, HealthCap and Truffle Capital. Piper Jaffray & Co. acted as sole placement agent, and Proskauer Rose LLP represented Altimune, in connection with the Offering.

The offering is being made pursuant to the Company's existing shelf registration statement on Form S-3 (File No. 333-217034), including a base prospectus, which was filed with the U.S. Securities and Exchange Commission on March 30, 2017 and declared effective by the Commission on April 6, 2017. The securities are being offered by means of a prospectus supplement and accompanying prospectus, forming a part of the effective registration statement. A prospectus supplement related to the offering will be filed with the SEC and will be available at the SEC's website at <http://www.sec.gov>. Electronic copies of the preliminary prospectus supplement also may be obtained from Piper Jaffray & Co., Attention: Prospectus Department, 800 Nicollet Mall, J12S03, Minneapolis, MN 55401, telephone: (800) 747-3924, email: prospectus@pjc.com.



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

About Altimune

Altimune is a clinical-stage immunotherapeutics company focused on the development of products to stimulate robust and durable immune responses for the prevention and treatment of disease and on the development of two next-generation anthrax vaccines that are intended to improve protection and safety while having favorable dosage and storage requirements compared to other anthrax vaccines. The company has two proprietary platform technologies, RespirVec and Densigen, each of which has been shown to activate the immune system in distinctly different ways than traditional vaccines.

Forward-Looking Statement

Any statements made in this press release relating to future financial or business performance, the completion of, or the use of proceeds, from the offering, conditions, plans, prospects, trends, or strategies and other financial and business matters, including without limitation, the prospects for commercializing or selling any product or drug candidates, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In addition, when or if used in this press release, the words “may,” “could,” “should,” “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan,” “predict” and similar expressions and their variants, as they relate to Altimune, Inc. (the “Company”) may identify forward-looking statements. The Company cautions that these forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Important factors that may cause actual results to differ materially from the results discussed in the forward looking statements or historical experience include risks and uncertainties, including risks relating to: realizing the benefits of the merger between Altimune, Inc. and PharmAthene, Inc.; clinical trials and the commercialization of proposed product candidates (such as marketing, regulatory, product liability, supply, competition, dependence on third parties and other risks); the regulatory approval process; dependence on intellectual property; the Company’s BARDA contract and other government programs, reimbursement and regulation; and the lack of financial resources and access to capital to fund proposed operations. Further information on the factors and risks that could affect the Company’s business, financial conditions and results of operations are contained in the Company’s filings with the U.S. Securities and Exchange Commission, including under the heading “Risk Factors” in the



Form 10-K filed March 14, 2017, Form 10-Q filed August 11, 2017 and in the Form 8-K filed on August 17, 2017, which are available at www.sec.gov.

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