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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of
the Securities Exchange Act of 1934
Date of Report (Date of earliest event reported): **March 8, 2017**

Oncobiologics, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-37759
(Commission File Number)

38-3982704
(IRS Employer Identification No.)

7 Clarke Drive
Cranbury, New Jersey
(Address of principal executive offices)

08512
(Zip Code)

Registrant's telephone number, including area code: **(609) 619-3990**

n/a

(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))
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Item 1.01. Entry into a Material Definitive Agreement.

On March 8, 2017, Oncobiologics, Inc. (the “Company”) entered into a purchase agreement and a registration rights agreement with an accredited investor, Lincoln Park Capital Fund, LLC (“Lincoln Park”), an Illinois limited liability company, providing for the purchase of up to \$15.4 million worth of the Company’s common stock over the term of the purchase agreement. In connection therewith and as contemplated by the purchase agreement, on March 8, 2017, the Company issued and sold 150,376 shares of its common stock, \$0.01 par value per share, for \$400,000 in cash.

Under the terms and subject to the conditions of the purchase agreement, the Company has the right, but not the obligation, to sell to Lincoln Park, and Lincoln Park is obligated to purchase up to, an additional \$15.0 million worth of shares of the Company’s common stock. In connection with the purchase agreement, the Company issued 113,205 shares of its common stock as initial commitment shares, to Lincoln Park and the Company will issue, pro rata, up to an additional 113,206 shares of its common stock as additional commitment shares to Lincoln Park in connection with any additional purchases. Such future sales of common stock by the Company, if any, will be subject to certain limitations, and may occur from time to time, at the Company’s option, over the 30-month period commencing on the date that a registration statement, which the Company agreed to file with the Securities and Exchange Commission (the “SEC”) pursuant to the registration rights agreement, is declared effective by the SEC and a final prospectus in connection therewith is filed and the other terms and condition of the purchase agreement are satisfied.

As contemplated by the purchase agreement, and so long as the closing price of the Company’s common stock exceeds \$1.50 per share, then the Company may direct Lincoln Park, at its sole discretion to purchase up to 30,000 shares of its common stock on any business day. The price per share for such purchases will be equal to the lower of: (i) the lowest sale price on the applicable purchase date and (ii) the arithmetic average of the three (3) lowest closing sale prices for the Company’s common stock during the ten (10) consecutive business days ending on the business day immediately preceding such purchase date (in each case, to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction that occurs on or after the date of the purchase agreement). The maximum amount of shares subject to any single regular purchase increases as the Company’s share price increases, subject to a maximum of \$1.0 million.

In addition to regular purchases, the Company may also direct Lincoln Park to purchase other amounts as accelerated purchases or as additional purchases if the closing sale price of the common stock exceeds certain threshold prices as set forth in the purchase agreement. In all instances, the Company may not sell shares of its common stock to Lincoln Park under the purchase agreement if it would result in Lincoln Park beneficially owning more than 4.99% of its common stock. There are no trading volume requirements or restrictions under the purchase agreement nor any upper limits on the price per share that Lincoln Park must pay for shares of common stock.

Lincoln Park represented to the Company, among other things, that it was an “accredited investor” (as such term is defined in Rule 501(a) of Regulation D under the Securities Act of 1933, as amended (the “Securities Act”)), and the Company sold the securities in reliance upon an exemption from registration contained in Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder.

The purchase agreement and the registration rights agreement contain customary representations, warranties, agreements and conditions to completing future sale transactions, indemnification rights and obligations of the parties. The Company has the right to terminate the purchase agreement at any time, at no cost or penalty. During any “event of default” under the purchase agreement, all of which are outside of Lincoln Park’s control, Lincoln Park does not have the right to terminate the purchase agreement; however, the Company may not initiate any regular or other purchase of shares by Lincoln Park, until such event of default is cured. In addition, in the event of bankruptcy proceedings by or against the Company, the purchase agreement will automatically terminate.

Actual sales of shares of common stock to Lincoln Park under the purchase agreement will depend on a variety of factors to be determined by the Company from time to time, including, among others, market conditions, the trading price of the common stock and determinations by the Company as to the appropriate sources of funding for the Company and its operations. Lincoln Park has no right to require any sales by the Company, but is obligated to make purchases from the Company as it directs in accordance with the purchase agreement. Lincoln Park has covenanted not to cause or engage in any manner whatsoever, any direct or indirect short selling or hedging of the Company’s shares.

The net proceeds under the purchase agreement to the Company will depend on the frequency and prices at which the Company sells shares of its stock to Lincoln Park. The Company expects that any proceeds received by the Company from such sales to Lincoln Park will be used for working capital and general corporate purposes.

This current report on Form 8-K shall not constitute an offer to sell or a solicitation of an offer to buy any shares of common stock, nor shall there be any sale of shares of common stock in any state or jurisdiction in which such an offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or other jurisdiction.

The foregoing descriptions of the purchase agreement and the registration rights agreement are qualified in their entirety by

reference to the full text of such agreements, copies of which are attached hereto as Exhibit 10.1 and 10.2, respectively, and each of which is incorporated herein in its entirety by reference. The representations, warranties and covenants contained in such agreements were made only for purposes of such agreements and as of specific dates, were solely for the benefit of the parties to such agreements, and may be subject to limitations agreed upon by the contracting parties.

Item 3.02. Unregistered Sales of Equity Securities.

The information contained above in Item 1.01 is hereby incorporated by reference into this Item 3.02.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
10.1	Purchase Agreement between Oncobiologics, Inc. and Lincoln Park Capital Fund, LLC, dated March 8, 2017.
10.2	Registration Rights Agreement between Oncobiologics, Inc. and Lincoln Park Capital Fund, LLC, dated March 8, 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.

Oncobiologics, Inc.

Date: March 9, 2017

By: /s/ Lawrence A. Kenyon
Lawrence A. Kenyon
Chief Financial Officer

PURCHASE AGREEMENT

PURCHASE AGREEMENT (the "Agreement"), dated as of March 8, 2017, by and between **ONCOBIOLOGICS, INC.**, a Delaware corporation (the "Company"), and **LINCOLN PARK CAPITAL FUND, LLC**, an Illinois limited liability company (the "Investor").

WHEREAS:

Subject to the terms and conditions set forth in this Agreement, the Company wishes to sell to the Investor, and the Investor wishes to buy from the Company, up to Fifteen Million Four Hundred Thousand Dollars (\$15,400,000) of the Company's common stock, \$0.01 par value per share (the "Common Stock"). The shares of Common Stock to be purchased hereunder (including, without limitation, the Initial Purchase Shares (as defined in Section 2(a) herein)) are referred to herein as the "Purchase Shares."

NOW THEREFORE, in consideration of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Company and the Investor hereby agree as follows:

1. CERTAIN DEFINITIONS.

For purposes of this Agreement, the following terms shall have the following meanings:

(a) "Accelerated Purchase Share Amount" means, with respect to any Accelerated Purchase made pursuant to Section 2(b) hereof, the number of Purchase Shares directed by the Company to be purchased by the Investor on an Accelerated Purchase Notice, which number of Purchase Shares shall not exceed the lesser of (i) 400% of the number of Purchase Shares directed by the Company to be purchased by the Investor pursuant to the corresponding Regular Purchase Notice for the corresponding Regular Purchase referred to in Section 2(b) hereof (subject to the Purchase Share limitations contained in Section 2(a) hereof) and (ii) the Accelerated Purchase Share Percentage multiplied by the trading volume of the Common Stock on the Principal Market during normal trading hours on the Accelerated Purchase Date.

(b) "Accelerated Purchase Date" means, with respect to any Accelerated Purchase made pursuant to Section 2(b) hereof, the Business Day immediately following the applicable Purchase Date with respect to the corresponding Regular Purchase referred to in Section 2(b) hereof.

(c) "Accelerated Purchase Notice" means, with respect to any Accelerated Purchase made pursuant to Section 2(b) hereof, an irrevocable written notice from the Company to the Investor directing the Investor to buy a specified Accelerated Purchase Share Amount on the applicable Accelerated Purchase Date pursuant to Section 2(b) hereof at the applicable Accelerated Purchase Price.

(d) "Accelerated Purchase Share Percentage" means, with respect to any Accelerated Purchase made pursuant to Section 2(b) hereof, twenty-five percent (25%).

(e) "Accelerated Purchase Price" means, with respect to any particular Accelerated Purchase made pursuant to Section 2(b) hereof, the lower of (i) ninety-six percent (96%) of the VWAP during (A) the entire trading day on the Accelerated Purchase Date, if the volume of shares of Common Stock traded on the Principal Market on the Accelerated Purchase Date has not exceeded the Accelerated Purchase Share Volume Maximum, or (B) the portion of the trading day of the Accelerated Purchase Date (calculated starting at the beginning of normal trading hours) until such time at which the volume of

shares of Common Stock traded on the Principal Market has exceeded the Accelerated Purchase Share Volume Maximum or (ii) the Closing Sale Price on the Accelerated Purchase Date (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

(f) “Accelerated Purchase Share Volume Maximum” means the number of shares of Common Stock traded on the Principal Market during normal trading hours on the Accelerated Purchase Date equal to (i) the amount of shares of Common Stock properly directed by the Company to be purchased on the Accelerated Purchase Notice, divided by (ii) the Accelerated Purchase Share Percentage (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

(g) “Additional Purchase Notice” means, with respect to any Additional Purchase pursuant to Section 2(c) hereof, an irrevocable written notice from the Company to the Investor directing the Investor to buy such applicable amount of Purchase Shares at the applicable Additional Purchase Price as specified by the Company therein on the Purchase Date.

(h) “Additional Purchase Price” means, with respect to any Additional Purchase made pursuant to Section 2(c) hereof, the lower of: (i) \$6.00 per share and (ii) 96% of the Purchase Price (as defined below) (in each case, to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction that occurs on or after the date of this Agreement).

(i) “Available Amount” means, initially, Fifteen Million Four Hundred Thousand Dollars (\$15,400,000) in the aggregate, which amount shall be reduced by (i) the Initial Purchase Amount upon the purchase of the Initial Purchase Shares by the Investor on the date hereof pursuant to Section 2(a), hereof and (ii) the Purchase Amount each time the Investor purchases shares of Common Stock (other than the Initial Purchase Shares) pursuant to Section 2 hereof.

(j) “Average Price” means a price per Purchase Share (rounded to the nearest tenth of a cent) equal to the quotient obtained by dividing (i) the aggregate gross purchase price paid by the Investor for all Purchase Shares purchased pursuant to this Agreement, by (ii) the aggregate number of Purchase Shares issued pursuant to this Agreement.

(k) “Bankruptcy Law” means Title 11, U.S. Code, or any similar federal or state law for the relief of debtors.

(l) “Base Price” means a price per Purchase Share equal to the sum of (i) the Signing Market Price and (ii) \$0.1334 (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction that occurs on or after the date of this Agreement).

(m) “Business Day” means any day on which the Principal Market is open for trading, including any day on which the Principal Market is open for trading for a period of time less than the customary time.

(n) “Closing Sale Price” means, for any security as of any date, the last closing sale price for such security on the Principal Market as reported by the Principal Market.

(o) “Confidential Information” means any information disclosed by either party to the other party, either directly or indirectly, in writing, orally or by inspection of tangible objects (including, without limitation, documents, prototypes, samples, plant and equipment), which is designated as “Confidential,” “Proprietary” or some similar designation. Information communicated orally shall be considered Confidential Information if such information is confirmed in writing as being Confidential Information within ten (10) Business Days after the initial disclosure. Confidential Information may also include information disclosed to a disclosing party by third parties. Confidential Information shall not, however, include any information which (i) was publicly known and made generally available in the public domain prior to the time of disclosure by the disclosing party; (ii) becomes publicly known and made generally available after disclosure by the disclosing party to the receiving party through no action or inaction of the receiving party; (iii) is already in the possession of the receiving party without confidential restriction at the time of disclosure by the disclosing party as shown by the receiving party’s files and records immediately prior to the time of disclosure; (iv) is obtained by the receiving party from a third party without a breach of such third party’s obligations of confidentiality; or (v) is independently developed by the receiving party without use of or reference to the disclosing party’s Confidential Information, as shown by documents and other competent evidence in the receiving party’s possession.

(p) “Custodian” means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

(q) “DTC” means The Depository Trust Company, or any successor performing substantially the same function for the Company.

(r) “DWAC Shares” means shares of Common Stock that are (i) issued in electronic form, (ii) freely tradable and transferable and without restriction on resale and (iii) timely credited by the Company to the Investor’s or its designee’s specified Deposit/Withdrawal at Custodian (DWAC) account with DTC under its Fast Automated Securities Transfer (FAST) Program, or any similar program hereafter adopted by DTC performing substantially the same function.

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

(t) “Material Adverse Effect” means any material adverse effect on (i) the enforceability of any Transaction Document, (ii) the results of operations, assets, business or financial condition of the Company, other than any material adverse effect that resulted exclusively from (A) any change in the United States or foreign economies or securities or financial markets in general that does not have a disproportionate effect on the Company, (B) any change that generally affects the industry in which the Company operates that does not have a disproportionate effect on the Company, (C) any change arising in connection with earthquakes, hostilities, acts of war, sabotage or terrorism or military actions or any escalation or material worsening of any such hostilities, acts of war, sabotage or terrorism or military actions existing as of the date hereof, (D) any action taken by the Investor, its affiliates or its or their successors and assigns with respect to the transactions contemplated by this Agreement, (E) the effect of any change in applicable laws or accounting rules that does not have a disproportionate effect on the Company, or (F) any change resulting from compliance with terms of this Agreement or the consummation of the transactions contemplated by this Agreement, or (iii) the Company’s ability to perform in any material respect on a timely basis its obligations under any Transaction Document to be performed as of the date of determination.

(u) “Maturity Date” means the first day of the month immediately following the thirty (30) month anniversary of the Commencement Date.

(v) “PEA Period” means the period commencing at 9:30 a.m., Eastern time, on the fifth (5th) Business Day immediately prior to the filing of any post-effective amendment to the Registration Statement (as defined herein) or New Registration Statement (as such term is defined in the Registration Rights Agreement), and ending at 9:30 a.m., Eastern time, on the Business Day immediately following, the effective date of any post-effective amendment to the Registration Statement (as defined herein) or New Registration Statement (as such term is defined in the Registration Rights Agreement).

(w) “Person” means an individual or entity including but not limited to any limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization and a government or any department or agency thereof.

(x) “Principal Market” means The NASDAQ Global Market (or any nationally recognized successor thereto); provided, however, that in the event the Company’s Common Stock is ever listed or traded on The NASDAQ Capital Market, The NASDAQ Global Select Market, the New York Stock Exchange, the NYSE MKT, the NYSE Arca, the OTC Bulletin Board, or the OTCQX or OTCQB operated by the OTC Markets Group, Inc. (or any nationally recognized successor to any of the foregoing), then the “Principal Market” shall mean such other market or exchange on which the Company’s Common Stock is then listed or traded.

(y) “Purchase Amount” means, with respect to any Regular Purchase, any Accelerated Purchase or any Additional Purchase made hereunder, as applicable, the portion of the Available Amount to be purchased by the Investor pursuant to Section 2 hereof.

(z) “Purchase Date” means, (i) with respect to any Regular Purchase made pursuant to Section 2(a) hereof, the Business Day on which the Investor receives after 4:00 p.m., Eastern time, but prior to 5:00 p.m., Eastern time, of such Business Day a valid Regular Purchase Notice that the Investor is to buy Purchase Shares pursuant to Section 2(a) hereof, or (ii) with respect to any Additional Purchase made pursuant to Section 2(c) hereof, the Business Day on which the Investor receives after 4:00 p.m., Eastern time, but prior to 5:00 p.m., Eastern time, of such Business Day a valid Additional Purchase Notice that the Investor is to buy Purchase Shares pursuant to Section 2(c) hereof, as applicable.

(aa) “Purchase Price” means, with respect to any Regular Purchase made pursuant to Section 2(a) hereof or any Additional Purchase made pursuant to Section 2(c) hereof (as applicable), the lower of: (i) the lowest Sale Price on the applicable Purchase Date and (ii) the arithmetic average of the three (3) lowest Closing Sale Prices for the Common Stock during the ten (10) consecutive Business Days ending on the Business Day immediately preceding such Purchase Date (in each case, to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction that occurs on or after the date of this Agreement).

(bb) “Regular Purchase Notice” means, with respect to any Regular Purchase pursuant to Section 2(a) hereof, an irrevocable written notice from the Company to the Investor directing the Investor to buy such applicable amount of Purchase Shares at the applicable Purchase Price as specified by the Company therein on the Purchase Date.

(cc) “Sale Price” means any trade price for the shares of Common Stock on the Principal Market as reported by the Principal Market.

(dd) “SEC” means the U.S. Securities and Exchange Commission.

(ee) “Securities” means, collectively, the Purchase Shares and the Commitment Shares.

(ff) “Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

(gg) “Signing Market Price” means \$2.65, representing the consolidated closing bid price of the Common Stock on The NASDAQ Global Market on the Business Day immediately preceding the date of this Agreement.

(hh) “Subsidiary” means any Person the Company wholly-owns or controls, or in which the Company, directly or indirectly, owns a majority of the voting stock or similar voting interest, in each case that would be disclosable pursuant to Item 601(b)(21) of Regulation S-K promulgated under the Securities Act.

(ii) “Transaction Documents” means, collectively, this Agreement and the schedules and exhibits hereto, the Registration Rights Agreement and the schedules and exhibits thereto, and each of the other agreements, documents, certificates and instruments entered into or furnished by the parties hereto in connection with the transactions contemplated hereby and thereby.

(jj) “Transfer Agent” means American Stock Transfer & Trust Company, LLC, or such other Person who is then serving as the transfer agent for the Company in respect of the Common Stock.

(kk) “VWAP” means in respect of an applicable Accelerated Purchase Date, the volume weighted average price of the Common Stock on the Principal Market, as reported on the Principal Market.

2. PURCHASE OF COMMON STOCK.

Subject to the terms and conditions set forth in this Agreement, the Company has the right to sell to the Investor, and the Investor has the obligation to purchase from the Company, Purchase Shares as follows:

(a) Commencement of Regular Sales of Common Stock. On the date of this Agreement, upon the satisfaction of the conditions set forth in Sections 7(I) and 8(I) hereof, the Company shall sell to the Investor and the Investor shall purchase 150,376 Purchase Shares (such initial Purchase Shares, the “Initial Purchase Shares”) for aggregate consideration of \$400,000 (the “Initial Purchase Amount”). Upon the satisfaction of all of the conditions set forth in Sections 7(II) and 8(II) hereof (the “Commencement” and the date of satisfaction of such conditions the “Commencement Date”) and thereafter, the Company shall have the right, but not the obligation, to direct the Investor, by its delivery to the Investor of a Regular Purchase Notice from time to time, to purchase up to Thirty Thousand (30,000) Purchase Shares (each such purchase a “Regular Purchase”), at the Purchase Price on the Purchase Date; provided, however, that (i) the Regular Purchase may be increased to up to Forty-Five Thousand (45,000) Purchase Shares, provided that the Closing Sale Price of the Common Stock is not below \$4.00 on the Purchase Date, (ii) the Regular Purchase may be increased to up to Sixty Thousand (60,000) Purchase Shares, provided that the Closing Sale Price of the Common Stock is not below \$5.00

on the Purchase Date, and (iii) the Regular Purchase may be increased to up to Eighty Thousand (80,000) Purchase Shares, provided that the Closing Sale Price of the Common Stock is not below \$6.00 on the Purchase Date (all of which share and dollar amounts shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction); and provided, further, that the Investor's committed obligation under any single Regular Purchase shall not exceed One Million Dollars (\$1,000,000). If the Company delivers any Regular Purchase Notice for a Purchase Amount in excess of the limitations contained in the immediately preceding sentence, such Regular Purchase Notice shall be void *ab initio* to the extent of the amount by which the number of Purchase Shares set forth in such Regular Purchase Notice exceeds the number of Purchase Shares which the Company is permitted to include in such Purchase Notice in accordance herewith, and the Investor shall have no obligation to purchase such excess Purchase Shares in respect of such Regular Purchase Notice; provided that the Investor shall remain obligated to purchase the number of Purchase Shares which the Company is permitted to include in such Regular Purchase Notice. The Company may deliver multiple Regular Purchase Notices to the Investor so long as at least one (1) Business Day has passed since the most recent Regular Purchase was completed. Notwithstanding the foregoing, the Company shall not deliver any Regular Purchase Notices during the PEA Period.

(b) Accelerated Purchases. Subject to the terms and conditions of this Agreement, in addition to purchases of Purchase Shares as described in Section 2(a) above, the Company shall also have the right, but not the obligation, to direct the Investor by the Company's delivery to the Investor of an Accelerated Purchase Notice from time to time, and the Investor thereupon shall have the obligation, to buy Purchase Shares at the Accelerated Purchase Price on the Accelerated Purchase Date in an amount equal to the Accelerated Purchase Share Amount (each such purchase, an "Accelerated Purchase"). The Company may deliver an Accelerated Purchase Notice to the Investor only on a Purchase Date on which the Company also properly submitted a Regular Purchase Notice for a Regular Purchase and the Closing Sale Price is not below \$3.00 (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction and, effective upon the consummation of any such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction, the Closing Sale Price is not below the lower of (i) the adjusted price and (ii) \$3.00). If the Company delivers any Accelerated Purchase Notice for an Accelerated Purchase Share Amount in excess of the limitations contained in the definition of Accelerated Purchase Share Amount, such Accelerated Purchase Notice shall be void *ab initio* to the extent of the amount by which the number of Purchase Shares set forth in such Accelerated Purchase Notice exceeds the Accelerated Purchase Share Amount which the Company is permitted to include in such Accelerated Purchase Notice in accordance herewith (which shall be confirmed in an Accelerated Purchase Confirmation (defined below)), and the Investor shall have no obligation to purchase such excess Purchase Shares in respect of such Accelerated Purchase Notice; provided that the Investor shall remain obligated to purchase the Accelerated Purchase Share Amount which the Company is permitted to include in such Accelerated Purchase Notice. Upon completion of each Accelerated Purchase Date, the Accelerated Purchase Share Amount and the applicable Accelerated Purchase Price shall be set forth on a confirmation of the Accelerated Purchase to be provided to the Company by the Investor (an "Accelerated Purchase Confirmation").

(c) Additional Purchases. Subject to the terms and conditions of this Agreement, from and after the thirtieth (30th) Business Day following the Commencement Date, in addition to purchases of Purchase Shares as described in Section 2(a) and Section 2(b) above, the Company shall also have the right, but not the obligation, to direct the Investor by the Company's delivery to the Investor of an Additional Purchase Notice from time to time, and the Investor thereupon shall have the obligation, to buy Purchase Shares at the Additional Purchase Price on the Purchase Date (each such purchase, an

“Additional Purchase”); provided, however, that (i) the Company may not deliver to the Investor more than three (3) separate Additional Purchase Notices pursuant to this Agreement, (ii) the Company may deliver an Additional Purchase Notice to the Investor only if at least thirty (30) Business Days have passed since the most recent Additional Purchase was completed, (iii) the Investor’s committed obligation under any single Additional Purchase shall not exceed Four Hundred Thousand Dollars (\$400,000), and (iv) the Investor’s committed obligation under all three Additional Purchases shall not exceed One Million Two Hundred Thousand Dollars (\$1,200,000) in the aggregate. The Company may deliver an Additional Purchase Notice to the Investor only on a Purchase Date on which the Closing Sale Price is not below \$3.00 (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction and, effective upon the consummation of any such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction, the Closing Sale Price is not below the lower of (i) the adjusted price and (ii) \$3.00). If the Company delivers any Additional Purchase Notice for a Purchase Amount in excess of the limitations contained in this Section 2(c), such Additional Purchase Notice shall be void *ab initio* to the extent of the amount by which the number of Purchase Shares set forth in such Additional Purchase Notice exceeds the number of Purchase Shares which the Company is permitted to include in such Additional Purchase Notice in accordance herewith, and the Investor shall have no obligation to purchase such excess Purchase Shares in respect of such Additional Purchase Notice; provided that the Investor shall remain obligated to purchase the number of Purchase Shares which the Company is permitted to include in such Additional Purchase Notice. Notwithstanding the foregoing, the Company shall not deliver any Additional Purchase Notice during the PEA Period.

(d) Payment for Purchase Shares. For each Regular Purchase, the Investor shall pay to the Company an amount equal to the Purchase Amount with respect to such Regular Purchase as full payment for such Purchase Shares via wire transfer of immediately available funds on the same Business Day that the Investor receives such Purchase Shares, if such Purchase Shares are received by the Investor before 1:00 p.m., Eastern time, or, if such Purchase Shares are received by the Investor after 1:00 p.m., Eastern time, the next Business Day. For each Additional Purchase, the Investor shall pay to the Company an amount equal to the Purchase Amount with respect to such Additional Purchase as full payment for such Purchase Shares via wire transfer of immediately available funds on the third Business Day following the date that the Investor receives such Purchase Shares. For each Accelerated Purchase, the Investor shall pay to the Company an amount equal to the Purchase Amount with respect to such Accelerated Purchase as full payment for such Purchase Shares via wire transfer of immediately available funds on the third Business Day following the date that the Investor receives such Purchase Shares. If the Company or the Transfer Agent shall fail for any reason or for no reason to electronically transfer any Purchase Shares as DWAC Shares in respect of a Regular Purchase, Additional Purchase or Accelerated Purchase (as applicable) within three (3) Business Days following the receipt by the Company of the Purchase Price, Additional Purchase Price or Accelerated Purchase Price, respectively, therefor in compliance with this Section 2(d), and if on or after such Business Day the Investor purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Investor of such Purchase Shares that the Investor anticipated receiving from the Company in respect of such Regular Purchase, Additional Purchase or Accelerated Purchase (as applicable), then the Company shall, within three (3) Business Days after the Investor’s request, either (i) pay cash to the Investor in an amount equal to the Investor’s total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the “Cover Price”), at which point the Company’s obligation to deliver such Purchase Shares as DWAC Shares shall terminate, or (ii) promptly honor its obligation to deliver to the Investor such Purchase Shares as DWAC Shares and pay cash to the Investor in an amount equal to the excess (if any) of the Cover Price over the total (A) Purchase Price for such Regular Purchase plus the total Accelerated Purchase Price for such Accelerated Purchase (as applicable) and (B) Additional Purchase

Price for such Additional Purchase (as applicable). The Company shall not issue any fraction of a share of Common Stock upon any Regular Purchase, Additional Purchase or Accelerated Purchase. If the issuance would result in the issuance of a fraction of a share of Common Stock, the Company shall round such fraction of a share of Common Stock up or down to the nearest whole share. All payments made under this Agreement shall be made in lawful money of the United States of America or wire transfer of immediately available funds to such account as the Company may from time to time designate by written notice in accordance with the provisions of this Agreement. Whenever any amount expressed to be due by the terms of this Agreement is due on any day that is not a Business Day, the same shall instead be due on the next succeeding day that is a Business Day.

(e) Purchase Price Floor. The Company may not deliver a Regular Purchase Notice to the Investor, and the Investor and the Company shall not effect any Regular Purchase under this Agreement, on any Purchase Date that the Closing Sale Price is less than the Floor Price. “Floor Price” means \$1.50, which shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction and, effective upon the consummation of any such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction, the Floor Price shall mean the lower of (i) the adjusted price and (ii) \$1.50.

(f) Compliance with Rules of Principal Market.

(i) Exchange Cap. Subject to Section 2(f)(ii) below, the Company shall not issue or sell any shares of Common Stock pursuant to this Agreement, and the Investor shall not purchase or acquire any shares of Common Stock pursuant to this Agreement, to the extent that after giving effect thereto, the aggregate number of shares of Common Stock that would be issued pursuant to this Agreement would exceed the maximum number of shares of Common Stock that the Company may issue pursuant to this Agreement and the transactions contemplated hereby (taking into account all shares of Common Stock issued or issuable pursuant to any transaction or series of transactions that may be aggregated with the transactions contemplated by this Agreement under applicable rules of The NASDAQ Stock Market) without (1) breaching the Company’s obligations under the applicable rules of The NASDAQ Stock Market or (2) obtaining stockholder approval under the applicable rules of The NASDAQ Stock Market (the “Exchange Cap”), unless and until the Company elects to solicit stockholder approval of the issuance of Common Stock pursuant to this Agreement and the stockholders of the Company have in fact approved the issuance of Common Stock pursuant to this Agreement in accordance with the applicable rules and regulations of The NASDAQ Stock Market, and the Certificate of Incorporation and Bylaws of the Company. For the avoidance of doubt, the Company may, but shall be under no obligation to, request its stockholders to approve the issuance of Common Stock pursuant to this Agreement; provided, that if stockholder approval is not obtained in accordance with this Section 2(f)(i), the Exchange Cap shall be applicable for all purposes of this Agreement and the transactions contemplated hereby at all times during the term of this Agreement (except as set forth in Section 2(f)(ii) below).

(ii) At-Market Transaction. Notwithstanding Section 2(f)(i) above, the Exchange Cap shall not be applicable for any purposes of this Agreement and the transactions contemplated hereby, solely to the extent that (and only for so long as) the Average Price shall equal or exceed the Base Price (it being hereby acknowledged and agreed that the Exchange Cap shall be applicable for all purposes of this Agreement and the transactions contemplated hereby at all other times during the term of this Agreement, unless the stockholder approval referred to in Section 2(f)(i) is obtained).

(iii) General. The Company shall not issue any shares of Common Stock pursuant to this Agreement if such issuance would reasonably be expected to result in (A) a violation of the Securities Act or (B) a breach of the rules and regulations of The NASDAQ Stock Market. The provisions of this Section 2(f) shall be implemented in a manner otherwise than in strict conformity with the terms hereof only if necessary to ensure compliance with the Securities Act and the rules and regulations of The NASDAQ Stock Market.

(g) Beneficial Ownership Limitation. Notwithstanding anything to the contrary contained in this Agreement, the Company shall not issue or sell, and the Investor shall not purchase or acquire, any shares of Common Stock under this Agreement which, when aggregated with all other shares of Common Stock then beneficially owned by the Investor and its affiliates (as calculated pursuant to Section 13(d) of the Exchange Act and Rule 13d-3 promulgated thereunder), would result in the beneficial ownership by the Investor and its affiliates of more than 4.99% of the then issued and outstanding shares of Common Stock (the "Beneficial Ownership Limitation"). Upon the written or oral request of the Investor, the Company shall promptly (but not later than one Business Day) confirm orally or in writing to the Investor the number of shares of Common Stock then outstanding. The Investor and the Company shall each cooperate in good faith in the determinations required hereby and the application hereof. The Investor's written certification to the Company of the applicability of the Beneficial Ownership Limitation, and the resulting effect thereof hereunder at any time, shall be conclusive with respect to the applicability thereof and such result absent manifest error.

3. INVESTOR'S REPRESENTATIONS AND WARRANTIES.

The Investor represents and warrants to the Company that as of the date hereof and as of the Commencement Date:

(a) Organization, Authority. Investor is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization, with the requisite power and authority to enter into and to consummate the transactions contemplated by this Agreement and otherwise to carry out its obligations hereunder and thereunder.

(b) Investment Purpose. The Investor is acquiring the Securities as principal for its own account for investment only and not with a view to or for distributing or reselling such Securities or any part thereof in violation of the Securities Act or any applicable state securities law, has no present intention of distributing any of such Securities in violation of the Securities Act or any applicable state securities law and has no direct or indirect arrangement or understandings with any other Persons to distribute or regarding the distribution of such Securities in violation of the Securities Act or any applicable state securities law (this representation and warranty not limiting the Investor's right to sell the Securities at any time pursuant to the Registration Statement described herein or otherwise in compliance with applicable federal and state securities laws). The Investor is acquiring the Securities hereunder in the ordinary course of its business.

(c) Accredited Investor Status. The Investor is an "accredited investor" as that term is defined in Rule 501(a)(3) of Regulation D promulgated under the Securities Act.

(d) Reliance on Exemptions. The Investor understands that the Securities are being offered and sold to it in reliance on specific exemptions from the registration requirements of United States federal and state securities laws and that the Company is relying in part upon the truth and accuracy of, and the Investor's compliance with, the representations, warranties, agreements, acknowledgments and

understandings of the Investor set forth herein in order to determine the availability of such exemptions and the eligibility of the Investor to acquire the Securities.

(e) Information. The Investor understands that its investment in the Securities involves a high degree of risk. The Investor (i) is able to bear the economic risk of an investment in the Securities including a total loss thereof, (ii) has such knowledge and experience in financial and business matters that it is capable of evaluating the merits and risks of the proposed investment in the Securities and (iii) has had an opportunity to ask questions of and receive answers from the officers of the Company concerning the financial condition and business of the Company and others matters related to an investment in the Securities. Neither such inquiries nor any other due diligence investigations conducted by the Investor or its representatives shall modify, amend or affect the Investor's right to rely on the Company's representations and warranties contained in Section 4 below. The Investor 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. The Investor acknowledges and agrees that the Company neither makes nor has made any representation or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 4 hereof.

(f) No Governmental Review. The Investor understands that no U.S. 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 an investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

(g) Transfer or Sale. The Investor understands that (i) the Securities may not be offered for sale, sold, assigned or transferred unless (A) registered pursuant to the Securities Act or (B) an exemption exists permitting such Securities to be sold, assigned or transferred without such registration; (ii) any sale of the Securities made in reliance on Rule 144 may be made only in accordance with the terms of Rule 144 and further, if Rule 144 is not applicable, any resale of the Securities under circumstances in which the seller (or the Person through whom the sale is made) may be deemed to be an underwriter (as that term is defined in the Securities Act) may require compliance with some other exemption under the Securities Act or the rules and regulations of the SEC thereunder.

(h) Validity; Enforcement. This Agreement has been duly and validly authorized, executed and delivered on behalf of the Investor and is a valid and binding agreement of the Investor enforceable against the Investor in accordance with its terms, subject as to enforceability to general principles of equity and to applicable bankruptcy, insolvency, reorganization, moratorium, liquidation and other similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies.

(i) Residency. The Investor is a resident of the State of Illinois.

(j) No Short Selling. The Investor represents and warrants to the Company that at no time prior to the date of this Agreement has any of the Investor, its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any (i) "short sale" (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of the Common Stock or (ii) hedging transaction, which establishes a net short position with respect to the Common Stock.

4. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.

The Company represents and warrants to the Investor that, as of the date hereof and as of the Commencement Date:

(a) Organization and Qualification. The Company is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite corporate power and authority to own and use its properties and assets and to carry on its business as currently conducted. The Company is not in violation or default of any of the provisions of its certificate of incorporation or bylaws. The Company is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not have or reasonably be expected to result in a Material Adverse Effect and no proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification. The Company has no Subsidiaries.

(b) Authorization; Enforcement; Validity. (i) The Company has the requisite corporate power and authority to enter into and perform its obligations under this Agreement and each of the other Transaction Documents, and to issue the Securities in accordance with the terms hereof and thereof, (ii) the execution and delivery of the Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby, including without limitation, the issuance of the Initial Commitment Shares (as defined below in Section 5(e)) and the reservation for issuance and the issuance of the Purchase Shares and the Additional Commitment Shares (as defined below in Section 5(e)) issuable under this Agreement, have been duly authorized by the Company's Board of Directors and no further consent or authorization is required by the Company, its Board of Directors or its stockholders, (iii) this Agreement has been, and each other Transaction Document shall be on the Commencement Date, duly executed and delivered by the Company and (iv) this Agreement constitutes, and each other Transaction Document upon its execution on behalf of the Company, shall constitute, the valid and binding obligations of the Company enforceable against the Company in accordance with their 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 creditors' rights and remedies. The Board of Directors of the Company has approved the resolutions (the "Signing Resolutions") substantially in the form as set forth as Exhibit B attached hereto to authorize this Agreement and the transactions contemplated hereby. The Signing Resolutions are valid, in full force and effect and have not been modified or supplemented in any respect. The Company has delivered to the Investor a true and correct copy of a unanimous written consent adopting the Signing Resolutions executed by all of the members of the Board of Directors of the Company. Except as set forth in this Agreement, no other approvals or consents of the Company's Board of Directors, any authorized committee thereof, and/or stockholders is necessary under applicable laws and the Company's Certificate of Incorporation and/or Bylaws to authorize the execution and delivery of this Agreement or any of the transactions contemplated hereby, including, but not limited to, the issuance of the Commitment Shares and the issuance of the Purchase Shares.

(c) Capitalization. As of the date hereof, the authorized capital stock of the Company is set forth in the Company's Annual Report on Form 10-K for the year ended September 30, 2016, as amended. Except as disclosed in the SEC Documents (as defined below), (i) no shares of the Company's capital stock are 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 debt securities, (iii) 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, any shares of capital stock of the Company, or contracts, commitments, understandings or arrangements by which the Company is or may become bound to issue additional shares of capital stock of the Company or options, warrants, scrip, rights to

subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, any shares of capital stock of the Company, (iv) there are no agreements or arrangements under which the Company is obligated to register the sale of any of its securities under the Securities Act (except the Registration Rights Agreement), (v) there are no outstanding securities or instruments of the Company which contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company is or may become bound to redeem a security of the Company, (vi) there are no securities or instruments containing anti-dilution or similar provisions that will be triggered by the issuance of the Securities as described in this Agreement and (vii) the Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement. The Company has furnished to the Investor true and correct copies of the Company's Certificate of Incorporation, as amended and as in effect on the date hereof (the "Certificate of Incorporation"), and the Company's Bylaws, as amended and as in effect on the date hereof (the "Bylaws").

(d) Issuance of Securities. Upon issuance and payment therefor in accordance with the terms and conditions of this Agreement, the Purchase Shares (including, without limitation, the Initial Purchase Shares) shall be validly issued, fully paid and nonassessable and free from all taxes, liens, charges, restrictions, rights of first refusal and preemptive rights with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock. Upon issuance in accordance with the terms and conditions of this Agreement, the Commitment Shares (as defined below in Section 5(e)) shall be validly issued, fully paid and nonassessable and free from all taxes, liens, charges, restrictions, rights of first refusal and preemptive rights with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock. 5,650,000 shares of Common Stock have been duly authorized and reserved for issuance upon purchase under this Agreement as Purchase Shares (other than the Initial Purchase Shares). 113,206 shares of Common Stock (subject to equitable adjustment for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction) have been duly authorized and reserved for issuance as Additional Commitment Shares in accordance with this Agreement.

(e) No Conflicts. 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 reservation for issuance and issuance of the Purchase Shares and the Commitment Shares) will not (i) result in a violation of the Certificate of Incorporation or the Bylaws 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 the Company is a party, or result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws and regulations and the rules and regulations of the Principal Market applicable to the Company) or by which any property or asset of the Company is bound or affected, except in the case of conflicts, defaults, terminations, amendments, accelerations, cancellations and violations under clause (ii), which would not reasonably be expected to result in a Material Adverse Effect. The Company is not in violation of any term of or in default under its Certificate of Incorporation or Bylaws. The Company is not in violation of any term of or is in default under any material contract, agreement, mortgage, indebtedness, indenture, instrument, judgment, decree or order or any statute, rule or regulation applicable to the Company, except for possible conflicts, defaults, terminations or amendments that would not reasonably be expected to have a Material Adverse Effect. The business of the Company is not being conducted, and shall not be conducted, in violation of any law, ordinance, or regulation of any governmental entity, except for possible violations, the sanctions for which either individually or in the aggregate could not reasonably be expected to have a Material Adverse Effect. Except as specifically contemplated by this

Agreement and as required under the Securities Act or applicable state securities laws and the rules and regulations of the Principal Market, the Company is not required to obtain any consent, authorization or order of, or make any filing or registration with, any court or governmental agency or any regulatory or self-regulatory agency in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents in accordance with the terms hereof or thereof. Except as set forth elsewhere in this Agreement, all consents, authorizations, orders, filings and registrations which the Company is required to obtain pursuant to the preceding sentence shall be obtained or effected on or prior to the Commencement Date. Since May 12, 2016, the Company has not received nor delivered any notices or correspondence from or to the Principal Market pertaining to the Company's material non-compliance with any continued listing standards of the Principal Market. To the Company's knowledge, the Principal Market has not commenced any delisting proceedings against the Company.

(f) SEC Documents; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the twelve months preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the "SEC Documents") on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Documents prior to the expiration of any such extension. As of their respective dates, the SEC Documents complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable. None of the SEC Documents, when filed, 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. The financial statements of the Company included in the SEC Documents comply in all material respects with applicable accounting requirements and the rules and regulations of the SEC with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved ("GAAP"), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments. Except as publicly available through the SEC's Electronic Data Gathering, Analysis, and Retrieval System ("EDGAR") or in connection with a confidential treatment request submitted to the SEC, the Company has received no notices or correspondence from the SEC for the one year preceding the date hereof. To the Company's knowledge, the SEC has not commenced any enforcement proceedings against the Company or any of its Subsidiaries.

(g) Absence of Certain Changes. Except as disclosed in the SEC Documents, since September 30, 2016, there has been no material adverse change in the business, properties, operations, financial condition or results of operations of the Company. The Company has not taken any steps, and does not currently expect to take 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 or insolvency proceedings. The Company is financially solvent and is generally able to pay its debts as they become due.

(h) Absence of Litigation. Except as disclosed in the SEC Documents, there is no action, suit, proceeding, inquiry or investigation before or by any court, public board, government agency, self-regulatory organization or body pending or, to the knowledge of the Company, threatened against or

affecting the Company, the Common Stock or any of the Company's officers or directors in their capacities as such that would reasonably be expected to have a Material Adverse Effect.

(i) Acknowledgment Regarding Investor's Status. The Company acknowledges and agrees that the Investor is acting solely in the capacity of arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby. The Company further acknowledges that the Investor is not acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby and any advice given by the 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 the Investor's purchase of the Securities. The Company further represents to the 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 and advisors.

(j) No General Solicitation; No Integrated Offering. Neither the Company, nor any of its affiliates, nor any Person acting on its or their behalf, has engaged in any form of general solicitation or general advertising (within the meaning of Regulation D under the Securities Act) in connection with the offer or sale of the Securities. Neither the Company, nor any of its affiliates, nor 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 require registration of the offer and sale of any of the Securities under the Securities Act, whether through integration with prior offerings or otherwise, or cause this offering of the Securities to be integrated with prior offerings by the Company in a manner that would require stockholder approval pursuant to the rules of the Principal Market on which any of the securities of the Company are listed or designated. The issuance and sale of the Securities hereunder does not contravene the rules and regulations of the Principal Market.

(k) Intellectual Property Rights. Except as disclosed in the SEC Documents, the Company owns or possesses adequate rights or licenses to use all material trademarks, trade names, service marks, service mark registrations, service names, patents, patent rights, copyrights, inventions, licenses, approvals, governmental authorizations, trade secrets and rights necessary to conduct its business as now conducted. None of the Company's material trademarks, trade names, service marks, service mark registrations, service names, patents, patent rights, copyrights, inventions, licenses, approvals, government authorizations, trade secrets or other intellectual property rights have expired or terminated, or, by the terms and conditions thereof, could expire or terminate within two years from the date of this Agreement, except as would not reasonably be expected to have a Material Adverse Effect. The Company does not have any knowledge of any infringement by the Company of any material trademark, trade name rights, patents, patent rights, copyrights, inventions, licenses, service names, service marks, service mark registrations, trade secret or other similar rights of others, or of any such development of similar or identical trade secrets or technical information by others, and there is no claim, action or proceeding being made or brought against, or to the Company's knowledge, being threatened against, the Company regarding trademark, trade name, patents, patent rights, invention, copyright, license, service names, service marks, service mark registrations, trade secret or other infringement, which could reasonably be expected to have a Material Adverse Effect.

(l) Environmental Laws. Except as disclosed in the SEC Documents, the Company (i) is in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("Environmental Laws"), (ii) has received all permits, licenses or other approvals required of it under applicable Environmental Laws to conduct its business and (iii) is in

compliance with all terms and conditions of any such permit, license or approval, except where, in each of the three foregoing clauses, the failure to so comply would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

(m) Title. Except as disclosed in the SEC Documents, the Company has good and marketable title in fee simple to all real property owned by them and good and marketable title in all personal property owned by it that is material to the business of the Company, in each case free and clear of all liens, encumbrances and defects (“Liens”) and, except for Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and Liens for the payment of federal, state or other taxes, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company are held by them under valid, subsisting and enforceable leases with which the Company are in compliance with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company.

(n) Insurance. The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as management of the Company believes to be prudent and customary in the businesses in which the Company is engaged. The Company has not been refused any insurance coverage sought or applied for and the Company has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not materially and adversely affect the condition, financial or otherwise, or the earnings, business or operations of the Company.

(o) Regulatory Permits. Except as disclosed in the SEC Documents, the Company possesses all material certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct its business, and the Company has not received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit, except, in the case of each of the two foregoing clauses, as would not reasonably be expected to have a Material Adverse Effect.

(p) Tax Status. Except as disclosed in the SEC Documents, the Company has made or filed all federal and state income and all other material tax returns, reports and declarations required by any jurisdiction to which it is subject (unless and only to the extent that the Company has set aside on its books provisions reasonably adequate for the payment of all unpaid and unreported taxes) and has 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 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, and except as would not reasonably be expected to have a Material Adverse Effect.

(q) Transactions With Affiliates. Except as disclosed in the SEC Documents, to the Company’s knowledge, none of the Company’s stockholders, officers or directors or any family member or affiliate of any of the foregoing, has either directly or indirectly an interest in, or is a party to, any transaction that would be required to be disclosed as a related party transaction pursuant to Item 404 of Regulation S-K promulgated under the Securities Act.

(r) Application of Takeover Protections. The Company and its board of directors have taken or will take prior to the Commencement Date all necessary action, if any, in order to render inapplicable

any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Certificate of Incorporation or the laws of the state of its incorporation which is or could become applicable to the Investor as a result of the transactions contemplated by this Agreement, including, without limitation, the Company's issuance of the Securities and the Investor's ownership of the Securities.

(s) Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents that will be timely publicly disclosed by the Company, the Company confirms that neither it nor any other Person acting on its behalf has provided the Investor or its agents or counsel with any information that it believes constitutes or might constitute material, non-public information that is not otherwise disclosed in the Registration Statement or the SEC Documents. The Company understands and confirms that the Investor will rely on the foregoing representation in effecting purchases and sales of securities of the Company. All of the disclosure furnished by or on behalf of the Company to the Investor regarding the Company, its business and the transactions contemplated hereby, taken as a whole, is true and correct and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement taken as a whole did not as of their issue date contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and agrees that the Investor neither makes nor has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3 hereof.

(t) Foreign Corrupt Practices. Neither the Company, nor to the knowledge of the Company, any agent or other Person acting on behalf of the Company, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company (or made by any Person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of the Foreign Corrupt Practices Act of 1977, as amended.

(u) DTC Eligibility. The Company, through the Transfer Agent, currently participates in the DTC Fast Automated Securities Transfer (FAST) Program and the Common Stock can be transferred electronically to third parties via the DTC Fast Automated Securities Transfer (FAST) Program.

(v) Sarbanes-Oxley. The Company is in compliance with all provisions of the Sarbanes-Oxley Act of 2002, as amended, which are applicable to it as of the date hereof.

(w) Certain Fees. No brokerage or finder's fees or commissions are or will be payable by the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Investor shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section 4(w) that may be due in connection with the transactions contemplated by the Transaction Documents.

(x) Investment Company. The Company is not, and immediately after receipt of payment for the Securities will not be, an “investment company” within the meaning of the Investment Company Act of 1940, as amended.

(y) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock pursuant to the Exchange Act nor has the Company received any notification that the SEC is currently contemplating terminating such registration. The Company has not, since May 12, 2016, received any notice from the Principal Market to the effect that the Company is not in compliance with the listing or maintenance requirements of the Principal Market. The Company is in compliance with all such listing and maintenance requirements.

(z) Accountants. The Company’s accountants are set forth in the SEC Documents and, to the knowledge of the Company, such accountants are an independent registered public accounting firm as required by the Securities Act.

(aa) No Market Manipulation. The Company has not, and to its knowledge no Person acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to 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) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company.

(bb) Shell Company Status. The Company is not currently, and has never been, an issuer identified in Rule 144(i)(1) under the Securities Act.

(cc) No Disqualification Events. None of the Company, any of its predecessors, any affiliated issuer, any director, executive officer, other officer of the Company participating in the offering contemplated hereby, any beneficial owner of 20% or more of the Company's outstanding voting equity securities, calculated on the basis of voting power, nor any promoter (as that term is defined in Rule 405 under the Securities Act) connected with the Company in any capacity at the time of sale (each, an “Issuer Covered Person”) is subject to any of the “Bad Actor” disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act (a “Disqualification Event”), except for a Disqualification Event covered by Rule 506(d)(2) or (d)(3) under the Securities Act. The Company has exercised reasonable care to determine whether any Issuer Covered Person is subject to a Disqualification Event.

5. COVENANTS.

(a) Filing of Current Report and Registration Statement. The Company agrees that it shall, within the time required under the Exchange Act, file with the SEC a report on Form 8-K relating to the transactions contemplated by, and describing the material terms and conditions of, the Transaction Documents (the “Current Report”). The Company shall also file with the SEC, within five (5) Business Days from the date hereof, a new registration statement (the “Registration Statement”) covering only the resale of the Purchase Shares (including, without limitation, all of the Initial Purchase Shares) and all of the Commitment Shares, in accordance with the terms of the Registration Rights Agreement between the Company and the Investor, dated as of the date hereof (the “Registration Rights Agreement”). The Company shall permit the Investor to review and comment upon a substantially complete draft of the Current Report at least two (2) Business Days prior to its filing with the SEC, and the Company shall give

due consideration to all such comments. The Investor shall use its reasonable best efforts to comment upon a substantially complete draft of the Current Report within one (1) Business Day from the date the Investor receives it from the Company. The Investor shall furnish to the Company such information regarding itself, the Securities held by it and the intended method of distribution thereof, including any arrangement between the Investor and any other Person relating to the sale or distribution of the Securities, as shall be reasonably requested by the Company in connection with the preparation and filing of the Current Report and the Registration Statement, and shall otherwise cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of the Current Report and the Registration Statement with the SEC.

(b) Blue Sky. The Company shall take all such action, if any, as is reasonably necessary in order to obtain an exemption for or to register or qualify (i) the issuance of the Commitment Shares and the sale of the Purchase Shares to the Investor under this Agreement and (ii) any subsequent resale of all Commitment Shares and all Purchase Shares by the Investor, in each case, under applicable securities or “Blue Sky” laws of the states of the United States in such states as is reasonably requested by the Investor from time to time, and shall provide evidence of any such action so taken to the Investor.

(c) Listing/DTC. To the extent applicable, the Company shall promptly secure the listing of all of the Purchase Shares and Commitment Shares to be issued to the Investor hereunder on the Principal Market (subject to official notice of issuance) and upon each other national securities exchange or automated quotation system, if any, upon which the Common Stock is then listed, and shall maintain, so long as any shares of Common Stock shall be so listed, such listing of all such Securities from time to time issuable hereunder. The Company shall use commercially reasonable efforts to maintain the listing of the Common Stock on the Principal Market and shall comply in all respects with the Company’s reporting, filing and other obligations under the bylaws or rules and regulations of the Principal Market. The Company shall not take any action that would reasonably be expected to result in the delisting or suspension of the Common Stock on the Principal Market. The Company shall promptly, and in no event later than the following Business Day, provide to the Investor copies of any notices it receives from the Principal Market regarding the continued eligibility of the Common Stock for listing on the Principal Market; provided, however, that the Company shall not be required to provide the Investor copies of any such notice that the Company reasonably believes constitutes material non-public information and the Company would not be required to publicly disclose such notice in any report or statement filed with the SEC under the Exchange Act or the Securities Act. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 5(c). The Company shall take all action necessary to ensure that its Common Stock can be transferred electronically as DWAC Shares.

(d) Prohibition of Short Sales and Hedging Transactions. The Investor agrees that beginning on the date of this Agreement and ending on the date of termination of this Agreement as provided in Section 11, the Investor and its agents, representatives and affiliates shall not in any manner whatsoever enter into or effect, directly or indirectly, any (i) “short sale” (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of the Common Stock or (ii) hedging transaction, which establishes a net short position with respect to the Common Stock.

(e) Issuance of Commitment Shares. In consideration for the Investor’s execution and delivery of this Agreement, the Company shall cause to be issued to the Investor a total of 113,205 shares of Common Stock (the “Initial Commitment Shares”) promptly following the execution of this Agreement and shall deliver to the Transfer Agent the Irrevocable Transfer Agent Instructions with respect to the issuance of such Initial Commitment Shares. The Company shall cause to be issued to the Investor up to 113,206 shares of Common Stock (the “Additional Commitment Shares”) and, collectively

with the Initial Commitment Shares, the "Commitment Shares"), as follows: in connection with each purchase of Purchase Shares (other than the Initial Purchase Shares) hereunder, the Company shall issue to the Investor a number of shares of Common Stock equal to the product of (i) 113,206 and (y) the Purchase Amount Fraction. The "Purchase Amount Fraction" shall mean a fraction, the numerator of which is the Purchase Amount purchased by the Investor with respect to such purchase of Purchase Shares (other than the Initial Purchase Shares) and the denominator of which is Fifteen Million Dollars (\$15,000,000). The Additional Commitment Shares shall be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction. For the avoidance of doubt, (1) all of the Initial Commitment Shares shall be fully earned as of the date of this Agreement, whether or not the Commencement shall occur or any Purchase Shares (other than the Initial Purchase Shares) are purchased by the Investor under this Agreement and irrespective of any subsequent termination of this Agreement and (2) the Additional Commitment Shares shall be fully earned as of the date of their issuance pursuant to this Agreement, irrespective of any subsequent termination of this Agreement.

(f) Due Diligence; Non-Public Information. The Investor shall have the right, from time to time as the Investor may reasonably deem appropriate, and upon reasonable advance notice to the Company, to perform reasonable due diligence on the Company during normal business hours. The Company and its officers and employees shall provide information and reasonably cooperate with the Investor in connection with any reasonable request by the Investor related to the Investor's due diligence of the Company. Each party hereto agrees not to disclose any Confidential Information of the other party to any third party and shall not use the Confidential Information for any purpose other than in connection with, or in furtherance of, the transactions contemplated hereby. Each party hereto acknowledges that the Confidential Information shall remain the property of the disclosing party and agrees that it shall take all reasonable measures to protect the secrecy of any Confidential Information disclosed by the other party. The receiving party may disclose Confidential Information to the extent such information is required to be disclosed by law, regulation or order of a court of competent jurisdiction or regulatory authority, provided that the receiving party shall promptly notify the disclosing party when such requirement to disclose arises, and shall cooperate with the disclosing party so as to enable the disclosing party to: (i) seek an appropriate protective order; and (ii) make any applicable claim of confidentiality in respect of such Confidential Information; and provided, further, that the receiving party shall disclose Confidential Information only to the extent required by the protective order or other similar order, if such an order is obtained, and, if no such order is obtained, the receiving party shall disclose only the minimum amount of such Confidential Information required to be disclosed in order to comply with the applicable law, regulation or order. In addition, any such Confidential Information disclosed pursuant to this section shall continue to be deemed Confidential Information. Notwithstanding anything in this Agreement to the contrary, the Company and the Investor agree that neither the Company nor any other Person acting on its behalf shall provide the Investor or its agents or counsel with any information that constitutes or may reasonably be considered to constitute material, non-public information, unless a simultaneous public announcement thereof is made by the Company in the manner contemplated by Regulation FD. In the event of a breach of the foregoing covenant by the Company or any Person acting on its behalf (as determined in the reasonable good faith judgment of the Investor), in addition to any other remedy provided herein or in the other Transaction Documents, if the Investor is holding any Securities at the time of the disclosure of such material non-public information, the Investor shall have the right to make a public disclosure, in the form of a press release, public advertisement or otherwise, of such material, non-public information without the prior approval by the Company; provided the Investor shall have first provided notice to the Company that it believes it has received information that constitutes material, non-public information, the Company shall have at least 24 hours to publicly disclose such material, non-public information prior to any such disclosure by the Investor, and the Company shall have failed to demonstrate to the Investor within such time period that such information does not constitute material,

non-public information and the Company shall have failed to publicly disclose such material, non-public information within such time period. The Investor shall not have any liability to the Company, any of its Subsidiaries, or any of their respective directors, officers, employees, stockholders or agents, for any such disclosure. The Company understands and confirms that the Investor shall be relying on the foregoing covenants in effecting transactions in securities of the Company.

(g) Purchase Records. The Investor and the Company shall each maintain records showing the remaining Available Amount at any given time and the dates and Purchase Amounts for each Regular Purchase, Accelerated Purchase and Additional Purchase or shall use such other method, reasonably satisfactory to the Investor and the Company.

(h) Taxes. The Company shall pay any and all transfer, stamp or similar taxes that may be payable with respect to the issuance and delivery of any shares of Common Stock to the Investor made under this Agreement.

(i) Use of Proceeds. The Company will use the net proceeds from the offering as described in the Registration Statement or the SEC Documents.

(j) Other Transactions. The Company shall not enter into, announce or recommend to its stockholders any agreement, plan, arrangement or transaction in or of which the terms thereof would restrict, materially delay, conflict with or impair the ability or right of the Company to perform its obligations under the Transaction Documents, including, without limitation, the obligation of the Company to deliver the Purchase Shares and the Commitment Shares to the Investor in accordance with the terms of the Transaction Documents.

(k) Integration. From and after the date of this Agreement, neither the Company, nor or any of its affiliates will, and the Company shall use its reasonable best efforts to ensure that no Person acting on their behalf will, directly or indirectly, make any offers or sales of any security or solicit any offers to buy any security, under circumstances that would (i) require registration of the offer and sale of any of the Securities by the Company to the Investor under the Securities Act, or (ii) cause this offering of the Securities by the Company to the Investor to be integrated with other offerings by the Company in a manner that would require stockholder approval pursuant to the rules of the Principal Market on which any of the securities of the Company are listed or designated, unless in the case of this clause (ii), stockholder approval is obtained before the closing of such subsequent transaction in accordance with the rules of such Principal Market.

(l) Limitation on Variable Rate Transactions. From and after the date of this Agreement until the later of (i) the 30-month anniversary of the date of this Agreement and (ii) the 30-month anniversary of the Commencement Date (if the Commencement has occurred), in either case irrespective of any earlier termination of this Agreement, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction, other than in connection with an Exempt Issuance. The Investor shall be entitled to seek injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages, without the necessity of showing economic loss and without any bond or other security being required. "Common Stock Equivalents" means any securities of the Company that entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock. "Variable Rate

Transaction” means a transaction in which the Company (i) issues or sells any equity or debt securities that are convertible into, exchangeable or exercisable for, or include the right to receive additional shares of Common Stock or Common Stock Equivalents either (A) at a conversion price, exercise price, exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for the Common Stock at any time after the initial issuance of such equity or debt securities (including, without limitation, pursuant to any “cashless exercise” provision), or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such equity or debt security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock (including, without limitation, any “full ratchet” or “weighted average” anti-dilution provisions, but not including any standard anti-dilution protection for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction), (ii) issues or sells any equity or debt securities, including without limitation, Common Stock or Common Stock Equivalents, either (A) at a price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock (other than standard anti-dilution protection for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction), or (B) that is subject to or contains any put, call, redemption, buy-back, price-reset or other similar provision or mechanism (including, without limitation, a “Black-Scholes” put or call right) that provides for the issuance of additional equity securities of the Company or the payment of cash by the Company, or (iii) enters into any agreement, including, but not limited to, an “equity line of credit” or other continuous offering or similar offering of Common Stock or Common Stock Equivalents, whereby the Company may sell Common Stock or Common Stock Equivalents at a future determined price. “Exempt Issuance” means the issuance of (a) Common Stock or Common Stock Equivalents to employees, officers, directors or vendors of the Company pursuant to any stock or option plan duly adopted for such purpose, by the Board of Directors or a majority of the members of a committee of directors established for such purpose, (b) securities upon the exercise or exchange of or conversion of any Securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into Common Stock issued and outstanding on the date of this Agreement, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities, (c) securities issued pursuant to acquisitions, divestitures, licenses, partnerships, collaborations or strategic transactions approved by the Board of Directors or a majority of the members of a committee of directors established for such purpose, which acquisitions, divestitures, licenses, partnerships, collaborations or strategic transactions can have a Variable Rate Transaction component, provided that any such issuance shall only be to a Person (or to the equity holders of a Person) which is, itself or through its subsidiaries, an operating company or an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, 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, or (d) Common Stock issued and sold pursuant to an “at-the-market offering” of Common Stock through a registered broker-dealer.

6. TRANSFER AGENT INSTRUCTIONS.

(a) On the date of this Agreement, the Company shall issue irrevocable instructions to the Transfer Agent substantially in the form attached hereto as **Exhibit D** to issue the Initial Purchase Shares and the Initial Commitment Shares in accordance with the terms of this Agreement (the “Irrevocable Transfer Agent Instructions”). The certificate(s) or book-entry statement(s) representing the Initial Purchase Shares and the Initial Commitment Shares, except as set forth below, shall bear the following restrictive legend (the “Restrictive Legend”):

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT AND MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS, UNLESS SOLD PURSUANT TO: (1) RULE 144 UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR (2) AN OPINION OF HOLDER'S COUNSEL, IN A CUSTOMARY FORM, THAT REGISTRATION IS NOT REQUIRED UNDER SAID ACT OR APPLICABLE STATE SECURITIES LAWS.

(b) On the earlier of (i) the Commencement Date and (ii) such time that the Investor shall request, provided all conditions of Rule 144 under the Securities Act are met, the Company shall, no later than two (2) Business Days following the delivery by the Investor to the Company or the Transfer Agent of one or more legended certificates or book-entry statements representing the Initial Purchase Shares and/or Initial Commitment Shares (which certificates or book-entry statements the Investor shall promptly deliver on or prior to the first to occur of the events described in clauses (i) and (ii) of this sentence), as directed by the Investor, issue and deliver (or cause to be issued and delivered) to the Investor, as requested by the Investor, either: (A) a certificate or book-entry statement representing such Initial Purchase Shares and/or Initial Commitment Shares that is free from all restrictive and other legends or (B) a number of shares of Common Stock equal to the number of Initial Purchase Shares and/or Initial Commitment Shares represented by the certificate(s) or book-entry statement(s) so delivered by the Investor as DWAC Shares. The Company shall take all actions to carry out the intent and accomplish the purposes of the immediately preceding sentence, including, without limitation, delivering all such legal opinions, consents, certificates, resolutions and instructions to the Transfer Agent, and any successor transfer agent of the Company, as may be requested from time to time by the Investor or necessary or desirable to carry out the intent and accomplish the purposes of the immediately preceding sentence. On the Commencement Date, the Company shall issue to the Transfer Agent, and any subsequent transfer agent, (i) irrevocable instructions in the form substantially similar to those used by the Investor in substantially similar transactions (the "Commencement Irrevocable Transfer Agent Instructions") and (ii) the notice of effectiveness of the Registration Statement in the form attached as an exhibit to the Registration Rights Agreement (the "Notice of Effectiveness of Registration Statement"), in each case to issue the Commitment Shares and the Purchase Shares in accordance with the terms of this Agreement and the Registration Rights Agreement. All Purchase Shares and Additional Commitment Shares to be issued from and after Commencement to or for the benefit of the Investor pursuant to this Agreement shall be issued only as DWAC Shares. The Company represents and warrants to the Investor that, while this Agreement is effective, no instruction other than the Commencement Irrevocable Transfer Agent Instructions and the Notice of Effectiveness of Registration Statement referred to in this Section 6(b) will be given by the Company to the Transfer Agent with respect to the Purchase Shares or the Commitment Shares from and after Commencement, and the Purchase Shares and the Commitment Shares covered by the Registration Statement shall otherwise be freely transferable on the books and records of the Company. The Company agrees that if the Company fails to fully comply with the provisions of this Section 6(b) within five (5) Business Days of the Investor providing the deliveries referred to above, the Company shall, at the Investor's written instruction, purchase such shares of Common Stock containing the Restrictive Legend from the Investor at the greater of the (i) purchase price paid for such shares of Common Stock (as applicable) and (ii) the Closing Sale Price of the Common Stock on the date of the Investor's written instruction.

7. CONDITIONS TO THE COMPANY'S RIGHT TO COMMENCE SALES OF SHARES OF COMMON STOCK.

I. The right of the Company hereunder to sell the Initial Purchase Shares on the date of this Agreement is subject to the satisfaction of each of the following conditions:

- (a) The Investor shall have executed each of the Transaction Documents and delivered the same to the Company; and
- (b) The representations and warranties of the Investor shall be true and correct in all material respects as of the date hereof.

II. The right of the Company hereunder to commence sales of the Purchase Shares (other than the Initial Purchase Shares) on the Commencement Date is subject to the satisfaction of each of the following conditions:

- (a) The Investor shall have executed each of the Transaction Documents and delivered the same to the Company;
- (b) The Registration Statement covering the resale of the Purchase Shares (including, without limitation, all of the Initial Purchase Shares) and all of the Initial Commitment Shares and Additional Commitment Shares shall have been declared effective under the Securities Act by the SEC, and no stop order with respect to the Registration Statement shall be pending or threatened by the SEC; and
- (c) The representations and warranties of the Investor shall be true and correct in all material respects as of the date hereof and as of the Commencement Date as though made at that time.

8. CONDITIONS TO THE INVESTOR'S OBLIGATION TO PURCHASE SHARES OF COMMON STOCK.

I. The obligation of the Investor to buy the Initial Purchase Shares under this Agreement is subject to the satisfaction of each of the following conditions:

- (a) The Company shall have executed each of the Transaction Documents and delivered the same to the Investor;
- (b) The Common Stock shall be listed or quoted on the Principal Market, trading in the Common Stock shall not have been within the last 365 days suspended by the SEC or the Principal Market, and all Securities to be issued by the Company to the Investor pursuant to this Agreement shall have been, if applicable, approved for listing or quotation on the Principal Market in accordance with the applicable rules and regulations of the Principal Market, subject only to official notice of issuance;

(c) The representations and warranties of the Company shall be true and correct in all material respects (except to the extent that any of such representations and warranties is already qualified as to materiality in Section 4 above, in which case, such representations and warranties shall be true and correct without further qualification) as of the date hereof (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such date) and the Company shall have performed, satisfied and complied 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 date hereof. The Investor shall have received a certificate, executed by the Chief Executive Officer (“CEO”), President or Chief Financial Officer (“CFO”) of the Company, dated as of the date hereof, to the foregoing effect in the form attached hereto as Exhibit A;

(d) The Board of Directors of the Company shall have adopted resolutions in substantially the form attached hereto as Exhibit B which shall be in full force and effect without any amendment or supplement thereto as of the date hereof;

(e) The Irrevocable Transfer Agent Instructions shall have been delivered to and acknowledged in writing by the Company and the Company's Transfer Agent (or any successor transfer agent);

(f) All federal, state and local governmental laws, rules and regulations applicable to the transactions contemplated by the Transaction Documents and necessary for the execution, delivery and performance of the Transaction Documents and the consummation of the transactions contemplated thereby in accordance with the terms thereof shall have been complied with, and all consents, authorizations and orders of, and all filings and registrations with, all federal, state and local courts or governmental agencies and all federal, state and local regulatory or self-regulatory agencies necessary for the execution, delivery and performance of the Transaction Documents and the consummation of the transactions contemplated thereby in accordance with the terms thereof shall have been obtained or made, including, without limitation, in each case those required under the Securities Act, the Exchange Act, applicable state securities or “Blue Sky” laws or applicable rules and regulations of the Principal Market, or otherwise required by the SEC, the Principal Market or any state securities regulators;

(g) No statute, regulation, order, decree, writ, ruling or injunction shall have been enacted, entered, promulgated, threatened or endorsed by any federal, state, local or foreign court or governmental authority of competent jurisdiction which prohibits the consummation of or which would materially modify or delay any of the transactions contemplated by the Transaction Documents; and

(h) No action, suit or proceeding before any federal, state, local or foreign arbitrator or any court or governmental authority of competent jurisdiction shall have been commenced or threatened, and no inquiry or investigation by any federal, state, local or foreign governmental authority of competent jurisdiction shall have been commenced or threatened, against the Company, or any of the officers, directors or affiliates of the Company, seeking to restrain, prevent or change the transactions contemplated by the Transaction Documents, or seeking material damages in connection with such transactions.

II. The obligation of the Investor to buy Purchase Shares (other than the Initial Purchase Shares) under this Agreement is subject to the satisfaction of each of the following conditions on or prior to the Commencement Date and, once such conditions have been initially satisfied, there shall not be any ongoing obligation to satisfy such conditions after the Commencement has occurred:

- (a) The Company shall have executed each of the Transaction Documents and delivered the same to the Investor;
- (b) The Company shall have issued or caused to be issued to the Investor (i) one or more certificates or book-entry statements representing the Initial Purchase Shares and the Initial Commitment Shares free from all restrictive and other legends or (ii) a number of shares of Common Stock equal to the number of Initial Purchase Shares and Initial Commitment Shares as DWAC Shares, in each case in accordance with Section 6(b);
- (c) The Common Stock shall be listed or quoted on the Principal Market, trading in the Common Stock shall not have been within the last 365 days suspended by the SEC or the Principal Market, and all Securities to be issued by the Company to the Investor pursuant to this Agreement shall have been, if applicable, approved for listing or quotation on the Principal Market in accordance with the applicable rules and regulations of the Principal Market, subject only to official notice of issuance;
- (d) The Investor shall have received the opinions of the Company's legal counsel dated as of the Commencement Date substantially in the forms agreed prior to the date of this Agreement by the Company's legal counsel and the Investor's legal counsel;
- (e) The representations and warranties of the Company shall be true and correct in all material respects (except to the extent that any of such representations and warranties is already qualified as to materiality in Section 4 above, in which case, such representations and warranties shall be true and correct without further qualification) as of the date hereof and as of the Commencement 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 date) and the Company shall have performed, satisfied and complied 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 Commencement Date. The Investor shall have received a certificate, executed by the CEO, President or CFO of the Company, dated as of the Commencement Date, to the foregoing effect in the form attached hereto as Exhibit A;
- (f) The Board of Directors of the Company shall have adopted resolutions in substantially the form attached hereto as Exhibit B which shall be in full force and effect without any amendment or supplement thereto as of the Commencement Date;
- (g) As of the Commencement Date, the Company shall have reserved out of its authorized and unissued Common Stock, (i) solely for the purpose of effecting purchases of Purchase Shares (other than the Initial Purchase Shares) hereunder, 5,650,000 shares of Common Stock, and (ii) solely for the purpose of effecting the issuance of Additional Commitment Shares hereunder, 113,206 shares of Common Stock;
- (h) The Commencement Irrevocable Transfer Agent Instructions and the Notice of Effectiveness of Registration Statement each shall have been delivered to and acknowledged in writing by the Company and the Company's Transfer Agent (or any successor transfer agent);
- (i) The Company shall have delivered to the Investor a certificate evidencing the incorporation and good standing of the Company in the State of Delaware issued by the Secretary of State of the State of Delaware as of a date within ten (10) Business Days of the Commencement Date;

(j) The Company shall have delivered to the Investor a certified copy of the Certificate of Incorporation as certified by the Secretary of State of the State of Delaware within ten (10) Business Days of the Commencement Date;

(k) The Company shall have delivered to the Investor a secretary's certificate executed by the Secretary of the Company, dated as of the Commencement Date, in the form attached hereto as **Exhibit C**;

(l) The Registration Statement covering the resale of the Purchase Shares (including, without limitation, all of the Initial Purchase Shares) and all of the Initial Commitment Shares and Additional Commitment Shares shall have been declared effective under the Securities Act by the SEC, and no stop order with respect to the Registration Statement shall be pending or threatened by the SEC. The Company shall have prepared and filed with the SEC, not later than one (1) Business Day after the effective date of the Registration Statement, a final and complete prospectus (the preliminary form of which shall be included in the Registration Statement) and shall have delivered to the Investor a true and complete copy thereof. Such prospectus shall be current and available for the resale by the Investor of all of the Securities covered thereby. The Current Report shall have been filed with the SEC, as required pursuant to Section 5(a). All reports, schedules, registrations, forms, statements, information and other documents required to have been filed by the Company with the SEC at or prior to the Commencement Date pursuant to the reporting requirements of the Exchange Act shall have been filed with the SEC within the applicable time periods prescribed for such filings under the Exchange Act, including any applicable extension periods contemplated by the Exchange Act;

(m) No Event of Default (as defined below) has occurred, or any event which, after notice and/or lapse of time, would reasonably be expected to become an Event of Default has occurred;

(n) All federal, state and local governmental laws, rules and regulations applicable to the transactions contemplated by the Transaction Documents and necessary for the execution, delivery and performance of the Transaction Documents and the consummation of the transactions contemplated thereby in accordance with the terms thereof shall have been complied with, and all consents, authorizations and orders of, and all filings and registrations with, all federal, state and local courts or governmental agencies and all federal, state and local regulatory or self-regulatory agencies necessary for the execution, delivery and performance of the Transaction Documents and the consummation of the transactions contemplated thereby in accordance with the terms thereof shall have been obtained or made, including, without limitation, in each case those required under the Securities Act, the Exchange Act, applicable state securities or "Blue Sky" laws or applicable rules and regulations of the Principal Market, or otherwise required by the SEC, the Principal Market or any state securities regulators;

(o) No statute, regulation, order, decree, writ, ruling or injunction shall have been enacted, entered, promulgated, threatened or endorsed by any federal, state, local or foreign court or governmental authority of competent jurisdiction which prohibits the consummation of or which would materially modify or delay any of the transactions contemplated by the Transaction Documents; and

(p) No action, suit or proceeding before any federal, state, local or foreign arbitrator or any court or governmental authority of competent jurisdiction shall have been commenced or threatened, and no inquiry or investigation by any federal, state, local or foreign governmental authority of competent jurisdiction shall have been commenced or threatened, against the Company, or any of the officers, directors or affiliates of the Company, seeking to restrain, prevent or change the transactions

contemplated by the Transaction Documents, or seeking material damages in connection with such transactions.

9. INDEMNIFICATION.

In consideration of the Investor's execution and delivery of the Transaction Documents and acquiring the Securities hereunder and in addition to all of the Company's other obligations under the Transaction Documents, the Company shall defend, protect, indemnify and hold harmless the Investor and all of its affiliates, stockholders, officers, directors and employees and any of the foregoing Person's 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 misrepresentation or 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 and arising out of or resulting from the execution, delivery, performance or enforcement of the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, other than, in the case of clause (c), with respect to Indemnified Liabilities which directly and primarily result from the fraud, gross negligence or willful misconduct of an Indemnitee. The indemnity in this Section 9 shall not apply to amounts paid in settlement of any claim if such settlement is effected without the prior written consent of the Company, which consent shall not be unreasonably withheld, conditioned or delayed. 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. Payment under this indemnification shall be made within thirty (30) days from the date Investor makes written request for it. A certificate containing reasonable detail as to the amount of such indemnification submitted to the Company by Investor shall be conclusive evidence, absent manifest error, of the amount due from the Company to Investor. If any action shall be brought against any Indemnitee in respect of which indemnity may be sought pursuant to this Agreement, such Indemnitee shall promptly notify the Company in writing, and the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Indemnitee. Any Indemnitee shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnitee, except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of such separate counsel, a material conflict on any material issue between the position of the Company and the position of such Indemnitee, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel.

10. EVENTS OF DEFAULT.

An "Event of Default" shall be deemed to have occurred at any time as any of the following events occurs:

(a) the effectiveness of a registration statement registering the resale of the Securities lapses for any reason (including, without limitation, the issuance of a stop order or similar order) or such registration statement (or the prospectus forming a part thereof) is unavailable to the Investor for resale of any or all of the Securities to be issued to the Investor under the Transaction Documents that are required to be included therein, and such lapse or unavailability continues for a period of ten (10) consecutive Business Days or for more than an aggregate of thirty (30) Business Days in any 365-day period, but excluding a lapse or unavailability where (i) the Company terminates a registration statement after the Investor has confirmed in writing that all of the Securities covered thereby have been resold or (ii) the Company supersedes one registration statement with another registration statement, including (without limitation) by terminating a prior registration statement when it is effectively replaced with a new registration statement covering Securities (provided in the case of this clause (ii) that all of the Securities covered by the superseded (or terminated) registration statement that have not theretofore been resold are included in the superseding (or new) registration statement);

(b) the suspension of the Common Stock from trading on the Principal Market for a period of one (1) Business Day, provided that the Company may not direct the Investor to purchase any shares of Common Stock during any such suspension;

(c) the delisting of the Common Stock from The NASDAQ Global Market, provided, however, that the Common Stock is not immediately thereafter trading on the New York Stock Exchange, The NASDAQ Capital Market, The NASDAQ Global Select Market, the NYSE MKT, the NYSE Arca, the OTC Bulletin Board, or the OTCQX or OTCQB operated by the OTC Markets Group, Inc. (or any nationally recognized successor to any of the foregoing);

(d) the failure for any reason by the Transfer Agent to issue (i) the Additional Commitment Shares to the Investor within three (3) Business Days after the date on which the Investor is entitled to receive such Additional Commitment Shares pursuant to Section 5(e) hereof and (ii) Purchase Shares to the Investor within three (3) Business Days after the applicable Purchase Date or Accelerated Purchase Date (as applicable) on which the Investor is entitled to receive such Purchase Shares;

(e) the Company breaches any representation, warranty, covenant or other term or condition under any Transaction Document if such breach could have a Material Adverse Effect and except, in the case of a breach of a covenant which is reasonably curable, only if such breach continues for a period of at least five (5) Business Days;

(f) if any Person commences a proceeding against the Company pursuant to or within the meaning of any Bankruptcy Law;

(g) if the Company, pursuant to or within the meaning of any Bankruptcy Law, (i) commences a voluntary case, (ii) consents to the entry of an order for relief against it in an involuntary case, (iii) consents to the appointment of a Custodian of it or for all or substantially all of its property, or (iv) makes a general assignment for the benefit of its creditors or is generally unable to pay its debts as the same become due;

(h) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that (i) is for relief against the Company in an involuntary case, (ii) appoints a Custodian of the Company or for all or substantially all of its property, or (iii) orders the liquidation of the Company;

(i) if at any time the Company is not eligible to transfer its Common Stock electronically as DWAC Shares; or

(j) if at any time after the Commencement Date, the Exchange Cap is reached (to the extent such Exchange Cap is applicable pursuant to Section 2(f) hereof).

In addition to any other rights and remedies under applicable law and this Agreement, so long as an Event of Default has occurred and is continuing, or if any event that, after notice and/or lapse of time, would reasonably be expected to become an Event of Default, has occurred and is continuing, the Company shall not deliver to the Investor any Regular Purchase Notice, Accelerated Purchase Notice or Additional Purchase Notice.

11. TERMINATION

This Agreement may be terminated only as follows:

(a) If pursuant to or within the meaning of any Bankruptcy Law, the Company commences a voluntary case or any Person commences a proceeding against the Company, a Custodian is appointed for the Company or for all or substantially all of its property, or the Company makes a general assignment for the benefit of its creditors (any of which would be an Event of Default as described in Sections 10(f), 10(g) and 10(h) hereof), this Agreement shall automatically terminate without any liability or payment to the Company (except as set forth below) without further action or notice by any Person.

(b) In the event that (i) the Company fails to file the Registration Statement with the SEC within the period specified in Section 5(a) hereof in accordance with the terms of the Registration Rights Agreement or (ii) the Commencement shall not have occurred on or before May 15, 2017, due to the failure to satisfy the conditions set forth in Sections 7(II) and 8(II) above with respect to the Commencement, then, in the case of clause (i) above, this Agreement may be terminated by the Investor at any time prior to the filing of the Registration Statement and, in the case of clause (ii) above, this Agreement may be terminated by either party at the close of business on May 15, 2017 or thereafter, in each case without liability of such party to the other party (except as set forth below); provided, however, that the right to terminate this Agreement under this Section 11(b) shall not be available to any party if such party is then in breach of any covenant or agreement contained in this Agreement or any representation or warranty of such party contained in this Agreement fails to be true and correct such that the conditions set forth in Section 7(II)(c) or Section 8(II)(e), as applicable, could not then be satisfied.

(c) At any time after the Commencement Date, the Company shall have the option to terminate this Agreement for any reason or for no reason by delivering notice (a “Company Termination Notice”) to the Investor electing to terminate this Agreement without any liability whatsoever of any party to any other party under this Agreement (except as set forth below). The Company Termination Notice shall not be effective until one (1) Business Day after it has been received by the Investor.

(d) This Agreement shall automatically terminate on the date that the Company sells and the Investor purchases the full Available Amount as provided herein, without any action or notice on the part

of any party and without any liability whatsoever of any party to any other party under this Agreement (except as set forth below).

(e) If, for any reason or for no reason, the full Available Amount has not been purchased in accordance with Section 2 of this Agreement by the Maturity Date, this Agreement shall automatically terminate on the Maturity Date, without any action or notice on the part of any party and without any liability whatsoever of any party to any other party under this Agreement (except as set forth below).

Except as set forth in Sections 11(a) (in respect of an Event of Default under Sections 10(f), 10(g) and 10(h), 11(d) and 11(e)), any termination of this Agreement pursuant to this Section 11 shall be effected by written notice from the Company to the Investor, or the Investor to the Company, as the case may be, setting forth the basis for the termination hereof. The representations and warranties and covenants of the Company and the Investor contained in Sections 3, 4, 5, and 6 hereof, the indemnification provisions set forth in Section 9 hereof and the agreements and covenants set forth in Sections 10, 11 and 12 shall survive the execution and delivery of this Agreement and any termination of this Agreement. No termination of this Agreement shall (i) affect the Company's or the Investor's rights or obligations under (A) this Agreement with respect to any pending Regular Purchases, Accelerated Purchases or Additional Purchases and the Company and the Investor shall complete their respective obligations with respect to any pending Regular Purchases, Accelerated Purchases and Additional Purchases under this Agreement and (B) the Registration Rights Agreement, which shall survive any such termination, or (ii) be deemed to release the Company or the Investor from any liability for intentional misrepresentation or willful breach of any of the Transaction Documents.

12. MISCELLANEOUS.

(a) Governing Law; Jurisdiction; Jury Trial. The corporate laws of the State of Delaware shall govern all issues concerning the relative rights of the Company and its stockholders. All other questions concerning the construction, validity, enforcement and interpretation of this Agreement and the other Transaction Documents shall be governed by the internal laws of the State of Illinois, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Illinois or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Illinois. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the State of Illinois, County of Cook, for the adjudication of any dispute hereunder or under the other Transaction Documents or in connection herewith or therewith, 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 HEREWITH 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 signature or signature delivered by e-mail in a “.pdf” format data file 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 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 shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction.

(e) Entire Agreement. The Transaction Documents supersede all other prior oral or written agreements between the Investor, the Company, their affiliates and Persons acting on their behalf with respect to the subject matter thereof, and this Agreement, the other Transaction Documents and the instruments referenced herein 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 the Investor makes any representation, warranty, covenant or undertaking with respect to such matters. The Company acknowledges and agrees that it has not relied on, in any manner whatsoever, any representations or statements, written or oral, other than as expressly set forth in the Transaction Documents.

(f) Notices. Any notices, consents 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 receipt when sent by facsimile or email (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); or (iii) one Business Day after deposit with a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses for such communications shall be:

If to the Company:

Oncobiologics, Inc.
7 Clarke Drive
Cranbury, New Jersey 08512
Telephone: (609) 619-3990
Facsimile: (609) 228-4113
E-mail: lawrencekenyon@OncoBiologics.com
Attention: Chief Financial Officer

With a copy to (which shall not constitute notice or service of process):

Cooley LLP
1114 Avenue of the Americas
New York, NY 10036
Telephone: (212) 479-6000
Facsimile: (212) 479-6275
E-mail: ypierre@cooley.com
Attention: Yvan-Claude J. Pierre, Esq.

If to the Investor:

Lincoln Park Capital Fund, LLC
440 North Wells, Suite 410
Chicago, IL 60654
Telephone: 312-822-9300
Facsimile: 312-822-9301
E-mail: jscheinfeld@lpcfunds.com/jcope@lpcfunds.com
Attention: Josh Scheinfeld/Jonathan Cope

With a copy to (which shall not constitute notice or service of process):

Greenberg Traurig, LLP
The MetLife Building
200 Park Avenue
New York, NY 10166
Telephone: (212) 801-9200
Facsimile: (212) 801-6400
E-mail: marsicoa@gtlaw.com
Attention: Anthony J. Marsico, Esq.

If to the Transfer Agent:

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, NY 11219
Telephone: (718) 921-8200, Ext. 6493
Facsimile: (718) 765-8713
Attention: Leicia Savinetti

or at such other address and/or facsimile number and/or to the attention of such other Person as the recipient party has specified by written notice given to each other party three (3) Business Days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent or other communication, (B) mechanically or electronically generated by the sender's facsimile machine or email account containing the time, date, and recipient facsimile number or email address, as applicable, and an image of the first page of such transmission or (C) provided by a nationally recognized overnight delivery service, shall be rebuttable evidence of personal service, receipt by facsimile or receipt from a nationally recognized overnight delivery 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. The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Investor, including by merger or consolidation. The Investor may not assign its rights or obligations under this Agreement.

(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.

(i) Publicity. The Company shall afford the Investor and its counsel with the opportunity to review and comment upon, shall consult with the Investor and its counsel on the form and substance of, and shall give due consideration to all such comments from the Investor or its counsel on, any press

release, SEC filing or any other public disclosure by or on behalf of the Company relating to the Investor, its purchases hereunder or any aspect of the Transaction Documents or the transactions contemplated thereby, not less than 24 hours prior to the issuance, filing or public disclosure thereof. The Investor must be provided with a final version of any such press release, SEC filing or other public disclosure at least 24 hours prior to any release, filing or use by the Company thereof. The Company agrees and acknowledges that its failure to fully comply with this provision constitutes a Material Adverse Effect.

(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 the other party may reasonably request in order to consummate and make effective, as soon as reasonably possible, the Commencement, and to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(k) No Financial Advisor, Placement Agent, Broker or Finder. The Company represents and warrants to the Investor that it has not engaged any financial advisor, placement agent, broker or finder in connection with the transactions contemplated hereby. The Investor represents and warrants to the Company that it has not engaged any financial advisor, placement agent, broker or finder in connection with the transactions contemplated hereby. The Company shall be responsible for the payment of any fees or commissions, if any, of any financial advisor, placement agent, broker or finder relating to or arising out of the transactions contemplated hereby. The Company shall pay, and hold the Investor harmless against, any liability, loss or expense (including, without limitation, reasonable attorneys' fees and out of pocket expenses) arising in connection with any such claim.

(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, Other Obligations, Breaches and Injunctive Relief. The Investor's remedies provided in this Agreement, including, without limitation, the Investor's remedies provided in Section 9, shall be cumulative and in addition to all other remedies available to the Investor under this Agreement, at law or in equity (including a decree of specific performance and/or other injunctive relief), no remedy of the Investor contained herein shall be deemed a waiver of compliance with the provisions giving rise to such remedy and nothing herein shall limit the Investor's right to pursue actual damages for any failure by the Company to comply with the terms of this Agreement. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Investor 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 Investor 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.

(n) Enforcement Costs. If: (i) this Agreement is placed by the Investor in the hands of an attorney for enforcement or is enforced by the Investor through any legal proceeding; (ii) an attorney is retained to represent the Investor in any bankruptcy, reorganization, receivership or other proceedings affecting creditors' rights and involving a claim under this Agreement; or (iii) an attorney is retained to represent the Investor in any other proceedings whatsoever in connection with this Agreement, then the Company shall pay to the Investor, as incurred by the Investor, all reasonable costs and expenses including reasonable attorneys' fees incurred in connection therewith, in addition to all other amounts due hereunder. If (i) this Agreement is placed by the Company in the hands of an attorney for enforcement or is enforced by the Company through any legal proceeding, or (ii) an attorney is retained to represent the

Company in any other proceedings whatsoever in connection with this Agreement then the Investor shall pay to the Company, as incurred by the Company, all reasonable costs and expenses including reasonable attorneys' fees incurred in connection therewith, in addition to all other amounts due hereunder. It is understood and agreed that any and all enforcement costs paid by a party to the other party pursuant to this section shall be promptly reimbursed by the receiving party if a court of competent jurisdiction determines in a final, non-appealable order that the paying party is not in breach of this Agreement.

(o) Amendment and Waiver; Failure or Indulgence Not Waiver. No provision of this Agreement may be amended or waived by the parties from and after the date that is one (1) Business Day immediately preceding the initial filing of the Registration Statement with the SEC. Subject to the immediately preceding sentence, (i) no provision of this Agreement may be amended other than by a written instrument signed by both parties hereto and (ii) no provision of this Agreement may be waived other than in a written instrument signed by the party against whom enforcement of such waiver is sought. No failure or delay 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.

* * * * *

IN WITNESS WHEREOF, the Investor and the Company have caused this Purchase Agreement to be duly executed as of the date first written above.

THE COMPANY:

ONCOBIOLOGICS, INC.

By: /s/ Lawrence Kenyon
Name: Lawrence Kenyon
Title: Chief Financial Officer

INVESTOR:

LINCOLN PARK CAPITAL FUND, LLC

BY: LINCOLN PARK CAPITAL, LLC
BY: ROCKLEDGE CAPITAL CORPORATION

By: /s/ Josh Scheinfeld
Name: Josh Scheinfeld
Title: President

EXHIBITS

Exhibit A	Form of Officer's Certificate
Exhibit B	Form of Resolutions of Board of Directors of the Company
Exhibit C	Form of Secretary's Certificate
Exhibit D	Form of Letter to Transfer Agent

EXHIBIT A

FORM OF OFFICER'S CERTIFICATE

This Officer's Certificate ("**Certificate**") is being delivered pursuant to [Section 8(I)(c)] [Section 8(II)(e)] of that certain Purchase Agreement dated as of March 8, 2017, ("**Purchase Agreement**"), by and between **ONCOBIOLOGICS, INC.**, a Delaware corporation (the "**Company**"), and **LINCOLN PARK CAPITAL FUND, LLC** (the "**Investor**"). Terms used herein and not otherwise defined shall have the meanings ascribed to them in the Purchase Agreement.

The undersigned, _____, _____ of the Company, hereby certifies, on behalf of the Company and not in his individual capacity, as follows:

1. I am the _____ of the Company;

2. The representations and warranties of the Company are true and correct in all material respects (except to the extent that any of such representations and warranties is already qualified as to materiality in Section 4 of the Purchase Agreement, in which case, such representations and warranties are true and correct without further qualification) as of the date when made and as of the Commencement Date as though made at that time (except for representations and warranties that speak as of a specific date, in which case such representations and warranties are true and correct as of such date);

3. The Company has performed, satisfied and complied in all material respects with covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by the Company at or prior to the Commencement Date.

4. The Company has not taken any steps, and does not currently expect to take any steps, to seek protection pursuant to any Bankruptcy Law nor does the Company currently have any knowledge or reason to believe that its creditors intend to initiate involuntary bankruptcy or insolvency proceedings. The Company is currently financially solvent and is generally able to pay its debts as they become due.

IN WITNESS WHEREOF, I have hereunder signed my name on this ____ day of _____.

Name:
Title:

The undersigned as Secretary of **ONCOBIOLOGICS, INC.**, a Delaware corporation, hereby certifies that Pankaj Mohan, Ph.D. is the duly elected, appointed, qualified and acting Chief Executive Officer of Oncobiologics, Inc. and that the signature appearing above is his genuine signature.

Lawrence A. Kenyon
Secretary

EXHIBIT B

**FORM OF COMPANY RESOLUTIONS
FOR SIGNING PURCHASE AGREEMENT**

**UNANIMOUS WRITTEN CONSENT OF
ONCOBIOLOGICS, INC.**

The undersigned, constituting all of the members of the Board of Directors (the "**Board**") of **ONCOBIOLOGICS, INC.**, a Delaware corporation (the "**Company**"), pursuant to Section 141(f) of the Delaware General Corporation Law (the "**DGCL**"), hereby adopt the following resolutions by unanimous written consent and direct that this consent be filed with the minutes of the proceedings of the Board:

WHEREAS, there has been presented to the Board of Directors of the Company a draft of the Purchase Agreement (the "**Purchase Agreement**") by and between the Company and Lincoln Park Capital Fund, LLC ("**Lincoln Park**"), providing for the purchase by Lincoln Park of up to Fifteen Million Four Hundred Thousand Dollars (\$15,400,000) of the Company's common stock, \$0.01 par value per share (the "**Common Stock**") and a draft of the Registration Rights Agreement (the "**Registration Rights Agreement**") by and between the Company and Lincoln Park providing for the registration of the shares of the Company's Common Stock issuable in respect of the Purchase Agreement on behalf of the Company; and

WHEREAS, after careful consideration of the Purchase Agreement, the documents incident thereto and other factors deemed relevant by the Board of Directors, the Board of Directors has determined that it is advisable and in the best interests of the Company and its stockholders to engage in the transactions contemplated by the Purchase Agreement, including, but not limited to, the issuance of up to 226,411 shares of Common Stock to Lincoln Park as a commitment fee (the "**Commitment Shares**") and the sale of shares of Common Stock to Lincoln Park up to the available amount under the Purchase Agreement (the "**Purchase Shares**") and to register such shares as contemplated by the Registration Rights Agreement.

TRANSACTION DOCUMENTS

NOW, THEREFORE, BE IT RESOLVED, that the transactions described in the Purchase Agreement are hereby approved and each of Pankaj Mohan and Lawrence Kenyon (the "**Authorized Officers**") are severally authorized to execute and deliver the Purchase Agreement, and any other agreements or documents contemplated thereby including, without limitation, the Registration Rights Agreement, with such amendments, changes, additions and deletions as the Authorized Officers may deem to be appropriate and approve on behalf of, the Company, such approval to be conclusively evidenced by the signature of an Authorized Officer thereon; and

FURTHER RESOLVED, that the terms and provisions of the Registration Rights Agreement by and among the Company and Lincoln Park are hereby approved and the Authorized Officers are authorized to execute and deliver the Registration Rights Agreement (pursuant to the terms of the Purchase Agreement), with such amendments, changes, additions and deletions as the Authorized Officer may deem appropriate and approve on behalf of, the Company, such approval to be conclusively evidenced by the signature of an Authorized Officer thereon; and

FURTHER RESOLVED, that the terms and provisions of the forms of Irrevocable Transfer Agent Instructions and Notice of Effectiveness of Registration Statement (collectively, the "**Instructions**") are

hereby approved and the Authorized Officers are authorized to execute and deliver the Instructions on behalf of the Company in accordance with the Purchase Agreement, with such amendments, changes, additions and deletions as the Authorized Officers may deem appropriate and approve on behalf of, the Company, such approval to be conclusively evidenced by the signature of an Authorized Officer thereon; and

EXECUTION OF PURCHASE AGREEMENT

FURTHER RESOLVED, that the Company be and it hereby is authorized to execute the Purchase Agreement providing for the purchase of up to Fifteen Million Four Hundred Thousand Dollars (\$15,400,000) of the Company's common stock; and

ISSUANCE OF COMMON STOCK

FURTHER RESOLVED, that the Company is hereby authorized to issue to Lincoln Park Capital Fund, LLC, 150,376 shares of Common Stock as Initial Purchase Shares, and that upon issuance of the Initial Purchase Shares pursuant to the Purchase Agreement the Initial Purchase Shares shall be duly authorized, validly issued, fully paid and nonassessable with no personal liability attaching to the ownership thereof; and

FURTHER RESOLVED, that the Company is hereby authorized to issue to Lincoln Park Capital Fund, LLC, 113,205 shares of Common Stock as Initial Commitment Shares and that upon issuance of the Initial Commitment Shares pursuant to the Purchase Agreement the Initial Commitment Shares shall be duly authorized, validly issued, fully paid and nonassessable with no personal liability attaching to the ownership thereof; and

FURTHER RESOLVED, that the Company is hereby authorized to issue up to 113,206 shares of Common Stock as Additional Commitment Shares under the Purchase Agreement in accordance with the terms of the Purchase Agreement and that, upon issuance of the Additional Commitment Shares pursuant to the Purchase Agreement, the Additional Commitment Shares will be duly authorized, validly issued, fully paid and nonassessable with no personal liability attaching to the ownership thereof; and

FURTHER RESOLVED, that the Company shall reserve 113,206 shares of Common Stock for issuance as Additional Commitment Shares under the Purchase Agreement; and

FURTHER RESOLVED, that the Company is hereby authorized to issue shares of Common Stock upon the purchase of Purchase Shares up to the Available Amount under the Purchase Agreement in accordance with the terms of the Purchase Agreement and that, upon issuance of the Purchase Shares pursuant to the Purchase Agreement, the Purchase Shares will be duly authorized, validly issued, fully paid and nonassessable with no personal liability attaching to the ownership thereof; and

FURTHER RESOLVED, that the Company shall initially reserve 5,650,000 shares of Common Stock for issuance as Purchase Shares (other than Initial Purchase Shares) under the Purchase Agreement.

APPROVAL OF ACTIONS

FURTHER RESOLVED, that, without limiting the foregoing, the Authorized Officers are, and each of them hereby is, authorized and directed to proceed on behalf of the Company and to take all such steps as deemed necessary or appropriate, with the advice and assistance of counsel, to cause the Company to consummate the agreements referred to herein and to perform its obligations under such agreements; and

FURTHER RESOLVED, that the Authorized Officers be, and each of them hereby is, authorized, empowered and directed on behalf of and in the name of the Company, to take or cause to be taken all such further actions and to execute and deliver or cause to be executed and delivered all such further agreements, amendments, documents, certificates, reports, schedules, applications, notices, letters and undertakings and to incur and pay all such fees and expenses as in their judgment shall be necessary, proper or desirable to carry into effect the purpose and intent of any and all of the foregoing resolutions, and that all actions heretofore taken by any officer or director of the Company in connection with the transactions contemplated by the agreements described herein are hereby approved, ratified and confirmed in all respects.

[SIGNATURE PAGE FOLLOWS]

This Action by Unanimous Written Consent shall be filed with the minutes of the proceedings of the Board. This Action may be signed in one or more counterparts, each of which shall be deemed an original, and all of which shall constitute one instrument.

IN WITNESS WHEREOF, the undersigned have executed this Unanimous Written Consent of the Board of Directors of Oncobiologics, Inc. as of date written below.

By: _____
Pankaj Mohan, Ph.D.
Date:

By: _____
Todd C. Brady, M.D., Ph.D.
Date:

By: _____
Scott Canute
Date:

By: _____
Albert D. Dyrness
Date:

By: _____
Donald J. Griffith
Date:

By: _____
Kurt J. Hilzinger
Date:

By: _____
Robin Smith Hoke
Date:

EXHIBIT C

FORM OF SECRETARY'S CERTIFICATE

This Secretary's Certificate ("Certificate") is being delivered pursuant to Section 8(II)(k) of that certain Purchase Agreement dated as of March 8, 2017 ("Purchase Agreement"), by and between **ONCOBIOLOGICS, INC.**, a Delaware corporation (the "Company"), and **LINCOLN PARK CAPITAL FUND, LLC** (the "Investor"), pursuant to which the Company may sell to the Investor up to Fifteen Million Four Hundred Thousand Dollars (\$15,400,000) of the Company's Common Stock, \$0.01 par value per share (the "Common Stock"). Terms used herein and not otherwise defined shall have the meanings ascribed to them in the Purchase Agreement.

The undersigned, Lawrence A. Kenyon, Secretary of the Company, hereby certifies, on behalf of the Company and not in his individual capacity, as follows:

1. I am the Secretary of the Company.

2. Attached hereto as Exhibit A and Exhibit B are true, correct and complete copies of the Company's bylaws ("Bylaws") and Certificate of Incorporation ("Charter"), in each case, as amended through the date hereof, and no action has been taken by the Company, its directors, officers or stockholders, in contemplation of the filing of any further amendment relating to or affecting the Bylaws or Charter.

3. Attached hereto as Exhibit C are true, correct and complete copies of the resolutions duly adopted by the Board of Directors of the Company by unanimous written consent effective as of _____, 2017. Such resolutions have not been amended, modified or rescinded and remain in full force and effect and such resolutions are the only resolutions adopted by the Company's Board of Directors, or any committee thereof, or the stockholders of the Company relating to or affecting (i) the entering into and performance of the Purchase Agreement, or the issuance, offering and sale of the Purchase Shares and the Commitment Shares and (ii) and the performance of the Company of its obligation under the Transaction Documents as contemplated therein.

4. As of the date hereof, the authorized, issued and reserved capital stock of the Company is as set forth on Exhibit D hereto.

IN WITNESS WHEREOF, I have hereunder signed my name on this ____ day of _____.

Secretary

The undersigned as Chief Executive Officer of **ONCOBIOLOGICS, INC.**, a Delaware corporation, hereby certifies that Lawrence A. Kenyon is the duly elected, appointed, qualified and acting Secretary of Oncobiologics, Inc., and that the signature appearing above is his genuine signature.

Pankaj Mohan, Ph.D.
Chief Executive Officer

EXHIBIT D

FORM OF LETTER TO THE TRANSFER AGENT FOR THE ISSUANCE OF THE INITIAL PURCHASE SHARES AND THE INITIAL COMMITMENT SHARES AT SIGNING OF THE PURCHASE AGREEMENT

[COMPANY LETTERHEAD]

March 8, 2017

[TRANSFER AGENT]

Re: Issuance of Common Stock to Lincoln Park Capital Fund, LLC

Dear _____,

On behalf of **ONCOBIOLOGICS, INC.** (the "Company"), you are hereby instructed to issue **as soon as possible** a book-entry statement representing an aggregate of 263,581 shares of our common stock in the name of **Lincoln Park Capital Fund, LLC**. The book-entry statement should be dated March 8, 2017. I have included a true and correct copy of a unanimous written consent executed by all of the members of the Board of Directors of the Company adopting resolutions approving the issuance of these shares. The book-entry statement should bear the following restrictive legend:

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT AND MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS, UNLESS SOLD PURSUANT TO: (1) RULE 144 UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR (2) AN OPINION OF HOLDER'S COUNSEL, IN A CUSTOMARY FORM, THAT REGISTRATION IS NOT REQUIRED UNDER SAID ACT OR APPLICABLE STATE SECURITIES LAWS.

The book-entry statement should be sent **as soon as possible via overnight mail** to the following address:

Lincoln Park Capital Fund, LLC
440 North Wells, Suite 410
Chicago, IL 60654
Attention: Josh Scheinfeld/Jonathan Cope

Thank you very much for your help. Please call me at (609) 619-3990 if you have any questions or need anything further.

ONCOBIOLOGICS, INC.

BY:

Lawrence A. Kenyon
Chief Financial Officer

REGISTRATION RIGHTS AGREEMENT

REGISTRATION RIGHTS AGREEMENT (this "Agreement"), dated as of March 8, 2017, by and between **ONCOBIOLOGICS, INC.**, a Delaware corporation (the "Company"), and **LINCOLN PARK CAPITAL FUND, LLC**, an Illinois limited liability company (together with it permitted assigns, the "Buyer"). Capitalized terms used herein and not otherwise defined herein shall have the respective meanings set forth in the Purchase Agreement by and between the parties hereto, dated as of the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the "Purchase Agreement").

WHEREAS:

The Company has agreed, upon the terms and subject to the conditions of the Purchase Agreement, to sell to the Buyer up to Fifteen Million Four Hundred Thousand Dollars (\$15,400,000) of Purchase Shares and to induce the Buyer to enter into the Purchase Agreement, the Company has agreed to provide certain registration rights under the Securities Act of 1933, as amended, and the rules and regulations thereunder, or any similar successor statute (collectively, the "Securities Act"), and applicable state securities laws.

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the Buyer hereby agree as follows:

1. DEFINITIONS.

As used in this Agreement, the following terms shall have the following meanings:

a. "Investor" means the Buyer, any transferee or assignee thereof to whom a Buyer assigns its rights under this Agreement in accordance with Section 9 and who agrees to become bound by the provisions of this Agreement, and any transferee or assignee thereof to whom a transferee or assignee assigns its rights under this Agreement in accordance with Section 9 and who agrees to become bound by the provisions of this Agreement.

b. "Person" means any individual or entity including but not limited to any corporation, a limited liability company, an association, a partnership, an organization, a business, an individual, a governmental or political subdivision thereof or a governmental agency.

c. "Register," "registered," and "registration" refer to a registration effected by preparing and filing one or more registration statements of the Company in compliance with the Securities Act and pursuant to Rule 415 under the Securities Act or any successor rule providing for offering securities on a continuous basis ("Rule 415"), and the declaration or ordering of effectiveness of such registration statement(s) by the United States Securities and Exchange Commission (the "SEC").

d. "Registrable Securities" means all of the Initial Commitment Shares, all of the Additional Commitment Shares, and all of the Purchase Shares, including, without limitation, all of the Initial Purchase Shares, that may, from time to time, be issued or become issuable to the Investor under the Purchase Agreement (without regard to any limitation or restriction on purchases), and any and all shares of capital stock issued or issuable with respect to the Purchase Shares, the Commitment Shares or the Purchase Agreement as a result of any stock split, stock dividend, recapitalization, exchange or similar event or otherwise, without regard to any limitation on purchases under the Purchase Agreement.

e. "Registration Statement" means one or more registration statements of the Company covering only the sale of the Registrable Securities.

2. REGISTRATION.

a. Mandatory Registration. The Company shall, within five (5) Business Days after the date hereof, file with the SEC an initial Registration Statement covering the maximum number of Registrable Securities as shall be permitted to be included thereon in accordance with applicable SEC rules, regulations and interpretations so as to permit the resale of such Registrable Securities by the Investor under Rule 415 under the Securities Act at then prevailing market prices (and not fixed prices), as mutually determined by both the Company and the Investor in consultation with their respective legal counsel, subject to the aggregate number of authorized shares of the Company's Common Stock then available for issuance in its Certificate of Incorporation. The initial Registration Statement shall register only the Registrable Securities and shall include all of the Initial Purchase Shares, all of the Initial Commitment Shares and all of the Additional Commitment Shares issued or issuable under the Purchase Agreement. The Investor and its counsel shall have a reasonable opportunity to review and comment upon such Registration Statement and any amendment or supplement to such Registration Statement and any related prospectus prior to its filing with the SEC, and the Company shall give due consideration to all such comments. The Investor shall furnish all information reasonably requested by the Company for inclusion therein. The Company shall use its commercially reasonable efforts to have the Registration Statement and any amendment declared effective by the SEC at the earliest possible date. The Company shall use its commercially reasonable efforts to keep the Registration Statement effective pursuant to Rule 415 promulgated under the Securities Act and available for the resale by the Investor of all of the Registrable Securities covered thereby at all times until the date on which the Investor shall have resold all the Registrable Securities covered thereby and no Available Amount remains under the Purchase Agreement (the "Registration Period"). The Registration Statement (including any amendments or supplements thereto and prospectuses contained therein) shall not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein, or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

b. Rule 424 Prospectus. The Company shall, as required by applicable securities regulations, from time to time file with the SEC, pursuant to Rule 424 promulgated under the Securities Act, the prospectus and prospectus supplements, if any, to be used in connection with sales of the Registrable Securities under the Registration Statement. The Investor and its counsel shall have a reasonable opportunity to review and comment upon such prospectus prior to its filing with the SEC, and the Company shall give due consideration to all such comments. The Investor shall use its commercially reasonable efforts to comment upon such prospectus within one (1) Business Day from the date the Investor receives a substantially complete draft of such prospectus.

c. Sufficient Number of Shares Registered. In the event the number of shares available under the Registration Statement is insufficient to cover all of the Registrable Securities, the Company shall amend the Registration Statement or file a new Registration Statement (a "New Registration Statement"), so as to cover all of such Registrable Securities (subject to the limitations set forth in Section 2(a)) as soon as practicable, but in any event not later than ten (10) Business Days after the necessity therefor arises, subject to any limits that may be imposed by the SEC pursuant to Rule 415 under the Securities Act. The Company shall use its commercially reasonable efforts to cause such amendment and/or New Registration Statement to become effective as soon as practicable following the filing thereof.

d. Offering. If the staff of the SEC (the "Staff") or the SEC seeks to characterize any offering pursuant to a Registration Statement filed pursuant to this Agreement as constituting an

offering of securities that does not permit such Registration Statement to become effective and be used for resales by the Investor under Rule 415 at then-prevailing market prices (and not fixed prices), or if after the filing of the initial Registration Statement with the SEC pursuant to Section 2(a), the Company is otherwise required by the Staff or the SEC to reduce the number of Registrable Securities included in such initial Registration Statement, then the Company shall reduce the number of Registrable Securities to be included in such initial Registration Statement (with the prior consent, which shall not be unreasonably withheld, of the Investor and its legal counsel as to the specific Registrable Securities to be removed therefrom) until such time as the Staff and the SEC shall so permit such Registration Statement to become effective and be used as aforesaid. In the event of any reduction in Registrable Securities pursuant to this paragraph, the Company shall file one or more New Registration Statements in accordance with Section 2(c) until such time as all Registrable Securities have been included in Registration Statements that have been declared effective and the prospectus contained therein is available for use by the Investor. Notwithstanding any provision herein or in the Purchase Agreement to the contrary, the Company's obligations to register Registrable Securities (and any related conditions to the Investor's obligations) shall be qualified as necessary to comport with any requirement of the SEC or the Staff as addressed in this Section 2(d).

3. RELATED OBLIGATIONS.

With respect to the Registration Statement and whenever any Registrable Securities are to be registered pursuant to Section 2 including on any New Registration Statement, the Company shall use its commercially reasonable efforts to effect the registration of the Registrable Securities in accordance with the intended method of disposition thereof and, pursuant thereto, the Company shall have the following obligations:

a. The Company shall prepare and file with the SEC such amendments (including post-effective amendments) and supplements to any Registration Statement and the prospectus used in connection with such Registration Statement, which prospectus is to be filed pursuant to Rule 424 promulgated under the Securities Act, as may be necessary to keep the Registration Statement or any New Registration Statement effective at all times during the Registration Period, and, during such period, comply with the provisions of the Securities Act with respect to the disposition of all Registrable Securities of the Company covered by the Registration Statement or any New Registration Statement until such time as all of such Registrable Securities shall have been disposed of in accordance with the intended methods of disposition by the Investor as set forth in such Registration Statement.

b. The Company shall permit the Investor to review and comment upon the Registration Statement or any New Registration Statement and all amendments and supplements thereto at least two (2) Business Days prior to their filing with the SEC, and not file any such document in a form to which Investor reasonably objects. The Investor shall use its commercially reasonable efforts to comment upon the Registration Statement or any New Registration Statement and any amendments or supplements thereto within two (2) Business Days from the date the Investor receives a substantially complete draft thereof. The Company shall furnish to the Investor, without charge any correspondence from the SEC or the staff of the SEC to the Company or its representatives relating to the Registration Statement or any New Registration Statement.

c. Upon request of the Investor, the Company shall furnish to the Investor, (i) promptly after the same is prepared and filed with the SEC, at least one copy of such Registration Statement and any amendment(s) thereto, including financial statements and schedules, all documents incorporated therein by reference and all exhibits, (ii) upon the effectiveness of any Registration Statement, a copy of the prospectus included in such Registration Statement and all amendments and supplements thereto (or such other number of copies as the Investor may reasonably request) and (iii)

such other documents, including copies of any preliminary or final prospectus, as the Investor may reasonably request from time to time in order to facilitate the disposition of the Registrable Securities owned by the Investor. For the avoidance of doubt, any filing available to the Investor via the SEC's live EDGAR system shall be deemed "furnished to the Investor" hereunder.

d. The Company shall use commercially reasonable efforts to (i) register and qualify the Registrable Securities covered by a Registration Statement under such other securities or "blue sky" laws of such jurisdictions in the United States as the Investor reasonably requests, (ii) prepare and file in those jurisdictions, such amendments (including post-effective amendments) and supplements to such registrations and qualifications as may be necessary to maintain the effectiveness thereof during the Registration Period, (iii) take such other actions as may be necessary to maintain such registrations and qualifications in effect at all times during the Registration Period, and (iv) take all other actions reasonably necessary or advisable to qualify the Registrable Securities for sale in such jurisdictions; provided, however, that the Company shall not be required in connection therewith or as a condition thereto to (x) qualify to do business in any jurisdiction where it would not otherwise be required to qualify but for this Section 3(d), (y) subject itself to general taxation in any such jurisdiction, or (z) file a general consent to service of process in any such jurisdiction. The Company shall promptly notify the Investor who holds Registrable Securities of the receipt by the Company of any notification with respect to the suspension of the registration or qualification of any of the Registrable Securities for sale under the securities or "blue sky" laws of any jurisdiction in the United States or its receipt of actual notice of the initiation or threatening of any proceeding for such purpose.

e. As promptly as practicable after becoming aware of such event or facts, the Company shall notify the Investor in writing of the happening of any event or existence of such facts as a result of which the prospectus included in any Registration Statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, and promptly prepare a supplement or amendment to such Registration Statement to correct such untrue statement or omission, and deliver a copy of such supplement or amendment to the Investor (or such other number of copies as the Investor may reasonably request). The Company shall also promptly notify the Investor in writing (i) when a prospectus or any prospectus supplement or post-effective amendment has been filed, and when a Registration Statement or any post-effective amendment has become effective (notification of such effectiveness shall be delivered to the Investor by email or facsimile on the same day of such effectiveness and by overnight mail), (ii) of any request by the SEC for amendments or supplements to any Registration Statement or related prospectus or related information, and (iii) of the Company's reasonable determination that a post-effective amendment to a Registration Statement would be appropriate.

f. The Company shall use its commercially reasonable efforts to prevent the issuance of any stop order or other suspension of effectiveness of any Registration Statement, or the suspension of the qualification of any Registrable Securities for sale in any jurisdiction and, if such an order or suspension is issued, to obtain the withdrawal of such order or suspension at the earliest possible moment and to notify the Investor of the issuance of such order and the resolution thereof or its receipt of actual notice of the initiation or threat of any proceeding for such purpose.

g. The Company shall (i) cause all the Registrable Securities to be listed on each securities exchange on which securities of the same class or series issued by the Company are then listed, if any, if the listing of such Registrable Securities is then permitted under the rules of such exchange, or (ii) secure designation and quotation of all the Registrable Securities on the Principal Market. The Company shall pay all fees and expenses in connection with satisfying its obligation under this Section.

h. The Company shall cooperate with the Investor to facilitate the timely issuance of the Registrable Securities to be offered pursuant to any Registration Statement, it being agreed that such Registrable Securities shall be issued as DWAC Shares and in such denominations or amounts as the Investor may reasonably request and registered in such names as the Investor may request.

i. The Company shall at all times provide a transfer agent and registrar with respect to its Common Stock.

j. If reasonably requested by the Investor, the Company shall (i) promptly incorporate in a prospectus supplement or post-effective amendment such information as the Investor believes should be included therein relating to the sale and distribution of Registrable Securities, including, without limitation, information with respect to the number of Registrable Securities being sold, the purchase price being paid therefor and any other terms of the offering of the Registrable Securities; (ii) make all required filings of such prospectus supplement or post-effective amendment as soon as practicable upon notification of the matters to be incorporated in such prospectus supplement or post-effective amendment; and (iii) supplement or make amendments to any Registration Statement or New Registration Statement.

k. The Company shall use its commercially reasonable efforts to cause the Registrable Securities covered by any Registration Statement to be registered with or approved by such other governmental agencies or authorities as may be necessary to consummate the disposition of such Registrable Securities.

l. Within one (1) Business Day after any Registration Statement which includes the Registrable Securities is declared effective by the SEC, the Company shall deliver, and shall cause legal counsel for the Company to deliver, to the transfer agent for such Registrable Securities (with copies to the Investor) confirmation that such Registration Statement has been declared effective by the SEC in the form attached hereto as Exhibit A. Thereafter, if requested by the Buyer at any time, the Company shall require its counsel to deliver to the Buyer a written confirmation whether or not the effectiveness of such Registration Statement has lapsed at any time for any reason (including, without limitation, the issuance of a stop order) and whether or not the Registration Statement is current and available to the Buyer for sale of all of the Registrable Securities.

m. The Company shall take all other reasonable actions necessary to expedite and facilitate disposition by the Investor of the Registrable Securities pursuant to any Registration Statement.

4. OBLIGATIONS OF THE INVESTOR.

a. The Company shall notify the Investor in writing of the information the Company reasonably requires from the Investor in connection with any Registration Statement hereunder. The Investor shall furnish to the Company such information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it as shall be reasonably required to effect the registration of such Registrable Securities and shall execute such documents in connection with such registration as the Company may reasonably request.

b. The Investor agrees to cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of any Registration Statement hereunder.

c. The Investor agrees that, upon receipt of any notice from the Company of the happening of any event or existence of facts of the kind described in Section 3(f) or the first sentence of 3(e), the Investor will immediately discontinue disposition of Registrable Securities pursuant to any

Registration Statement(s) covering such Registrable Securities until the Investor's receipt of the copies of the supplemented or amended prospectus contemplated by Section 3(f) or the first sentence of 3(e). Notwithstanding anything to the contrary, the Company shall cause its transfer agent to promptly deliver shares of Common Stock without any restrictive legend in accordance with the terms of the Purchase Agreement in connection with any sale of Registrable Securities with respect to which an Investor has entered into a contract for sale prior to the Investor's receipt of a notice from the Company of the happening of any event of the kind described in Section 3(f) or the first sentence of Section 3(e) and for which the Investor has not yet settled.

5. EXPENSES OF REGISTRATION.

All reasonable expenses, other than sales or brokerage commissions, incurred in connection with registrations, filings or qualifications pursuant to Sections 2 and 3, including, without limitation, all registration, listing and qualifications fees, printers and accounting fees, and fees and disbursements of counsel for the Company, shall be paid by the Company.

6. INDEMNIFICATION.

a. To the fullest extent permitted by law, the Company will, and hereby does, indemnify, hold harmless and defend the Investor, each Person, if any, who controls the Investor, the members, the directors, officers, partners, employees, agents, representatives of the Investor and each Person, if any, who controls the Investor within the meaning of the Securities Act or the Securities Exchange Act of 1934, as amended (the "Exchange Act") (each, an "Indemnified Person"), against any losses, claims, damages, liabilities, judgments, fines, penalties, charges, costs, attorneys' fees, amounts paid in settlement or expenses, joint or several, (collectively, "Claims") incurred in investigating, preparing or defending any action, claim, suit, inquiry, proceeding, investigation or appeal taken from the foregoing by or before any court or governmental, administrative or other regulatory agency, body or the SEC, whether pending or threatened, whether or not an indemnified party is or may be a party thereto ("Indemnified Damages"), to which any of them may become subject insofar as such Claims (or actions or proceedings, whether commenced or threatened, in respect thereof) arise out of or are based upon: (i) any untrue statement or alleged untrue statement of a material fact in the Registration Statement, any New Registration Statement or any post-effective amendment thereto or in any filing made in connection with the qualification of the offering under the securities or other "blue sky" laws of any jurisdiction in which Registrable Securities are offered ("Blue Sky Filing"), or the omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) any untrue statement or alleged untrue statement of a material fact contained in the final prospectus (as amended or supplemented, if the Company files any amendment thereof or supplement thereto with the SEC) or the omission or alleged omission to state therein any material fact necessary to make the statements made therein, in light of the circumstances under which the statements therein were made, not misleading, (iii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act, any other law, including, without limitation, any state securities law, or any rule or regulation thereunder relating to the offer or sale of the Registrable Securities pursuant to the Registration Statement or any New Registration Statement or (iv) any material violation by the Company of this Agreement (the matters in the foregoing clauses (i) through (iv) being, collectively, "Violations"). The Company shall reimburse each Indemnified Person promptly as such expenses are incurred and are due and payable, for any reasonable legal fees or other reasonable expenses incurred by them in connection with investigating or defending any such Claim. Notwithstanding anything to the contrary contained herein, the indemnification agreement contained in this Section 6(a): (i) shall not apply to a Claim by an Indemnified Person arising out of or based upon a Violation which occurs in reliance upon and in conformity with information about the Investor furnished in writing to the Company by such Indemnified Person expressly for use in connection with the preparation of the Registration Statement, any New Registration Statement

or any such amendment thereof or supplement thereto, if such prospectus was timely made available by the Company pursuant to Section 3(c) or Section 3(e); (ii) with respect to any superseded prospectus, shall not inure to the benefit of any such person from whom the person asserting any such Claim purchased the Registrable Securities that are the subject thereof (or to the benefit of any person controlling such person) if the untrue statement or omission of material fact contained in the superseded prospectus was corrected in the revised prospectus, as then amended or supplemented, if such revised prospectus was timely made available by the Company pursuant to Section 3(c) or Section 3(e), and the Indemnified Person was promptly advised in writing not to use the incorrect prospectus prior to the use giving rise to a violation and such Indemnified Person, notwithstanding such advice, used it; (iii) shall not be available to the extent such Claim is based on a failure of the Investor to deliver or to cause to be delivered the prospectus made available by the Company, if such prospectus was timely made available by the Company pursuant to Section 3(c) or Section 3(e); and (iv) shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of the Company, which consent shall not be unreasonably withheld. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of the Indemnified Person and shall survive the transfer of the Registrable Securities by the Investor pursuant to Section 9.

b. In connection with the Registration Statement or any New Registration Statement, the Investor agrees to indemnify, hold harmless and defend, to the same extent and in the same manner as is set forth in Section 6(a), the Company, each of its directors, each of its officers who signs the Registration Statement or any New Registration Statement, each Person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act (collectively and together with an Indemnified Person, an "Indemnified Party"), against any Claim or Indemnified Damages to which any of them may become subject, under the Securities Act, the Exchange Act or otherwise, insofar as such Claim or Indemnified Damages arise out of or are based upon any Violation, in each case to the extent, and only to the extent, that such Violation occurs in reliance upon and in conformity with written information about the Investor set forth on Exhibit B attached hereto and furnished to the Company by the Investor expressly for use in connection with such registration statement; and, subject to Section 6(d), the Investor will reimburse any legal or other expenses reasonably incurred by them in connection with investigating or defending any such Claim; provided, however, that the indemnity agreement contained in this Section 6(b) and the agreement with respect to contribution contained in Section 7 shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of the Investor, which consent shall not be unreasonably withheld; provided, further, however, that the Investor shall be liable under this Section 6(b) for only that amount of a Claim or Indemnified Damages as does not exceed the net proceeds to the Investor as a result of the sale of Registrable Securities pursuant to such Registration Statement. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such Indemnified Party and shall survive the transfer of the Registrable Securities by the Investor pursuant to Section 9.

c. Promptly after receipt by an Indemnified Person or Indemnified Party under this Section 6 of notice of the commencement of any action or proceeding (including any governmental action or proceeding) involving a Claim, such Indemnified Person or Indemnified Party shall, if a Claim in respect thereof is to be made against any indemnifying party under this Section 6, 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 Indemnified Person or the Indemnified Party, as the case may be; provided, however, that an Indemnified Person or Indemnified Party shall have the right to retain its own counsel with the fees and expenses to be paid by the indemnifying party, if, in the reasonable opinion of counsel retained by the indemnifying party, the representation by such counsel of the Indemnified Person or Indemnified Party and the indemnifying party would be inappropriate due to actual

or potential differing interests between such Indemnified Person or Indemnified Party and any other party represented by such counsel in such proceeding. The Indemnified Party or Indemnified Person shall cooperate fully with the indemnifying party in connection with any negotiation or defense of any such action or claim by the indemnifying party and shall furnish to the indemnifying party all information reasonably available to the Indemnified Party or Indemnified Person which relates to such action or claim. The indemnifying party shall keep the Indemnified Party or Indemnified Person 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 written consent, provided, however, that the indemnifying party shall not unreasonably withhold, delay or condition its consent. No indemnifying party shall, without the consent of the Indemnified Party or Indemnified Person, 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 Indemnified Party or Indemnified Person of a release from all liability in respect to such claim or litigation. Following indemnification as provided for hereunder, the indemnifying party shall be subrogated to all rights of the Indemnified Party or Indemnified Person 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 Indemnified Person or Indemnified Party under this Section 6, except to the extent that the indemnifying party is prejudiced in its ability to defend such action.

d. The indemnification required by this Section 6 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 Damages are incurred.

e. The indemnity agreements contained herein shall be in addition to (i) any cause of action or similar right of the Indemnified Party or Indemnified Person against the indemnifying party or others, and (ii) any liabilities the indemnifying party may be subject to pursuant to the law.

7. CONTRIBUTION.

To the extent any indemnification by an indemnifying party is prohibited or limited by law, the indemnifying party agrees to make the maximum contribution with respect to any amounts for which it would otherwise be liable under Section 6 to the fullest extent permitted by law; provided, however, that: (i) no seller of Registrable Securities guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any seller of Registrable Securities who was not guilty of fraudulent misrepresentation; and (ii) contribution by any seller of Registrable Securities shall be limited in amount to the net amount of proceeds received by such seller from the sale of such Registrable Securities.

8. REPORTS AND DISCLOSURE UNDER THE SECURITIES ACTS.

With a view to making available to the Investor the benefits of Rule 144 promulgated under the Securities Act or any other similar rule or regulation of the SEC that may at any time permit the Investor to sell securities of the Company to the public without registration ("Rule 144"), the Company agrees, at the Company's sole expense, so long as the Investor owns Registrable Securities, to use commercially reasonable efforts to:

- a. make and keep public information available, as those terms are understood and defined in Rule 144;

b. file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act so long as the Company remains subject to such requirements and the filing of such reports and other documents is required for the applicable provisions of Rule 144;

c. furnish to the Investor so long as the Investor owns Registrable Securities, promptly upon request, (i) a written statement by the Company that it has complied with the reporting and or disclosure provisions of Rule 144, the Securities Act and the Exchange Act, (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company, and (iii) such other information as may be reasonably requested to permit the Investor to sell such securities pursuant to Rule 144 without registration; and

d. take such additional action as is requested by the Investor to enable the Investor to sell the Registrable Securities pursuant to Rule 144, including, without limitation, delivering all such legal opinions, consents, certificates, resolutions and instructions to the Company's Transfer Agent as may be requested from time to time by the Investor and otherwise fully cooperate with Investor and Investor's broker to effect such sale of securities pursuant to Rule 144.

The Company agrees that damages may be an inadequate remedy for any breach of the terms and provisions of this Section 8 and that Investor shall, whether or not it is pursuing any remedies at law, be entitled to seek equitable relief in the form of a preliminary or permanent injunctions, without having to post any bond or other security, upon any breach or threatened breach of any such terms or provisions.

9. ASSIGNMENT OF REGISTRATION RIGHTS.

The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Investor. The Investor may not assign its rights under this Agreement without the written consent of the Company, other than to an affiliate of the Investor controlled by Jonathan Cope or Josh Scheinfeld, in which case the assignee must agree in writing to be bound by the terms and conditions of this Agreement.

10. AMENDMENT OF REGISTRATION RIGHTS.

No provision of this Agreement may be amended or waived by the parties from and after the date that is one Business Day immediately preceding the initial filing of the Registration Statement with the SEC. Subject to the immediately preceding sentence, no provision of this Agreement may be (i) amended other than by a written instrument signed by both parties hereto or (ii) waived other than in a written instrument signed by the party against whom enforcement of such waiver is sought. Failure of any party to exercise any right or remedy under this Agreement or otherwise, or delay by a party in exercising such right or remedy, shall not operate as a waiver thereof.

11. MISCELLANEOUS.

a. A Person is deemed to be a holder of Registrable Securities whenever such Person owns or is deemed to own of record such Registrable Securities. If the Company receives conflicting instructions, notices or elections from two or more Persons with respect to the same Registrable Securities, the Company shall act upon the basis of instructions, notice or election received from the registered owner of such Registrable Securities.

b. 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 receipt, when sent by facsimile or email (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); or (iii) one (1) Business Day after deposit with a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses for such communications shall be:

If to the Company:

Oncobiologics, Inc.
7 Clarke Drive
Cranbury, New Jersey 08512
Telephone: (609) 619-3990
Facsimile: (609) 228-4113
E-mail: lawrencekenyon@OncoBiologics.com
Attention: Chief Financial Officer

With a copy to (which shall not constitute notice or service of process):

Cooley LLP
1114 Avenue of the Americas
New York, NY 10036
Telephone: (212) 479-6721
Facsimile: (212) 479-6275
E-mail: ypierre@cooley.com
Attention: Yvan-Claude J. Pierre, Esq.

If to the Investor:

Lincoln Park Capital Fund, LLC
440 North Wells, Suite 410
Chicago, IL 60654
Telephone: 312-822-9300
Facsimile: 312-822-9301
E-mail: jscheinfeld@lpcfunds.com/jcope@lpcfunds.com
Attention: Josh Scheinfeld/Jonathan Cope

With a copy to (which shall not constitute notice or service of process):

Greenberg Traurig, LLP
The MetLife Building
200 Park Avenue
New York, NY 10166
Telephone: (212) 801-9200
Facsimile: (212) 801-6400
E-mail: marsicoa@gtlaw.com
Attention: Anthony J. Marsico, Esq.

or at such other address and/or facsimile number and/or to the attention of such other person as the recipient party has specified by written notice given to each other party three (3) Business 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) mechanically or electronically generated by the sender's facsimile machine or email account containing the time, date, recipient facsimile number or email address, as applicable, and an image of the first page of such transmission or (C) provided by a

nationally recognized overnight delivery service, shall be rebuttable evidence of personal service, receipt by facsimile or receipt from a nationally recognized overnight delivery service in accordance with clause (i), (ii) or (iii) above, respectively.

c. The corporate laws of the State of Delaware shall govern all issues concerning the relative rights of the Company and its stockholders. All other questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of Illinois, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Illinois or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Illinois. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting the State of Illinois, County of Cook, 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. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction. **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 HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

d. This Agreement and the Purchase Agreement constitute the entire agreement among the parties hereto with respect to the subject matter hereof and thereof. There are no restrictions, promises, warranties or undertakings among the parties hereto, other than those set forth or referred to herein and therein. This Agreement and the Purchase Agreement supersede all prior agreements and understandings among the parties hereto with respect to the subject matter hereof and thereof.

e. Subject to the requirements of Section 9, this Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties hereto.

f. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

g. This Agreement may be executed in identical counterparts, each of which shall be deemed an original but all of which shall constitute one and the same agreement. This Agreement, once executed by a party, may be delivered to the other party hereto by facsimile transmission or by e-mail in a “.pdf” format data file of a copy of this Agreement bearing the signature of the party so delivering this Agreement.

h. 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 the other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

i. 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.

j. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person.

* * * * *

IN WITNESS WHEREOF, the parties have caused this Registration Rights Agreement to be duly executed as of day and year first above written.

THE COMPANY:

ONCOBIOLOGICS, INC.

By: /s/ Lawrence Kenyon
Name: Lawrence Kenyon
Title: Chief Financial Officer

BUYER:

LINCOLN PARK CAPITAL FUND, LLC
BY: LINCOLN PARK CAPITAL, LLC
BY: ROCKLEDGE CAPITAL CORPORATION

By: /s/ Josh Scheinfeld
Name: Josh Scheinfeld
Title: President

EXHIBIT A

TO REGISTRATION RIGHTS AGREEMENT

**FORM OF NOTICE OF EFFECTIVENESS
OF REGISTRATION STATEMENT**

[Date]

[TRANSFER AGENT]

Re: Oncobiologics, Inc.

Ladies and Gentlemen:

We are counsel to Oncobiologics, Inc., a Delaware corporation (the "Company"), and have represented the Company in connection with that certain Purchase Agreement, dated as of March 8, 2017 (the "Purchase Agreement"), entered into by and between the Company and Lincoln Park Capital Fund, LLC (the "Buyer"), pursuant to which the Company has issued to the Buyer an aggregate of 263,581 shares of the Company's common stock, par value \$0.01 per share (the "Common Stock"), and may in the future issue to the Buyer shares of Common Stock in an amount up to an additional Fifteen Million Dollars (\$15,000,000), together with the Additional Commitment Shares (as defined below), in accordance with the terms of the Purchase Agreement. In connection with the transactions contemplated by the Purchase Agreement, the Company has registered with the U.S. Securities and Exchange Commission (the "SEC") the following shares of Common Stock:

- (1) 150,376 shares of Common Stock that have been issued to the Buyer on the date of the Purchase Agreement (the "Initial Purchase Shares");
- (2) [_____] shares of Common Stock to be issued to the Buyer upon purchase by the Buyer from the Company from time to time in accordance with the terms of the Purchase Agreement (the "Purchase Shares");
- (3) 113,205 shares of Common Stock that have been issued to the Buyer as an initial commitment fee on the date of the Purchase Agreement (the "Initial Commitment Shares"); and
- (4) 113,206 shares of Common Stock to be issued to the Buyer as an additional commitment fee from time to time in accordance with the terms of the Purchase Agreement (the "Additional Commitment Shares" and, collectively with the Initial Commitment Shares, the "Commitment Shares").

Pursuant to the Purchase Agreement, the Company also has entered into a Registration Rights Agreement, dated as of March 8, 2017, with the Buyer (the "Registration Rights Agreement") pursuant to which the Company agreed, among other things, to register the Initial Purchase Shares, the Purchase Shares, and the Commitment Shares under the Securities Act of 1933, as amended (the "Securities Act"). In connection with the Company's obligations under the Purchase Agreement and the Registration Rights Agreement, on March [___], 2017, the Company filed a Registration Statement (File No. 333-[____]) (the

“Registration Statement”) with the SEC relating to the resale of the Initial Purchase Shares, the Purchase Shares and the Commitment Shares.

In connection with the foregoing, we advise you that the SEC has entered an order declaring the Registration Statement effective under the Securities Act at [] [A.M./P.M.] on [], 2017 and we have no knowledge, after review of the stop order notification website maintained by the SEC, that any stop order suspending its effectiveness has been issued or that any proceedings for that purpose are pending before, or threatened by, the SEC and the Initial Purchase Shares, the Purchase Shares and the Commitment Shares are available for resale under the Securities Act pursuant to the Registration Statement and may be issued without any restrictive legend or stop transfer orders maintained against them.

Very truly yours,
Cooley LLP

By: _____

cc: Lincoln Park Capital Fund, LLC

EXHIBIT B

TO REGISTRATION RIGHTS AGREEMENT

**Information About The Investor Furnished To The Company By The Investor
Expressly For Use In Connection With The Registration Statement**

Information With Respect to Lincoln Park Capital

As of the date of the Purchase Agreement, Lincoln Park Capital Fund, LLC, beneficially owned 263,581 shares of our common stock. Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park Capital, LLC, the manager of Lincoln Park Capital Fund, LLC, are deemed to be beneficial owners of all of the shares of common stock owned by Lincoln Park Capital Fund, LLC. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares being offered under the prospectus filed with the SEC in connection with the transactions contemplated under the Purchase Agreement. Lincoln Park Capital, LLC is not a licensed broker dealer or an affiliate of a licensed broker dealer.
