

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) September 24, 2013

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

<u>Delaware</u> (State or other jurisdiction of incorporation)	<u>001-35076</u> (Commission File Number)	<u>31-1080091</u> (IRS Employer Identification No.)
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<u>425 Metro Place North, Suite 450, Dublin, Ohio</u> (Address of principal executive offices)	<u>43017</u> (Zip Code)
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Registrant's telephone number, including area code (614) 793-7500

(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 (see General Instruction A.2. below):

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))

Item 1.01. Entry into a Material Definitive Agreement.

Securities Purchase Agreement

On September 24, 2013, Navidea Biopharmaceuticals, Inc. (the “Company”) entered into a Securities Purchase Agreement (the “Purchase Agreement”) with Crede CG III, Ltd., a Bermuda exempted limited company (the “Investor”), placed by the placement agent described below (the “Offering”). Under the terms of the Purchase Agreement, the Company agreed to sell and issue to the Investor (i) an aggregate of 10,563,381 shares (“Investor Shares”) of common stock, par value \$0.001 per share (“Common Stock”), at a price of \$2.84 per Investor Share, and (ii) warrants (the “Warrants”) to purchase up to an aggregate of 3,169,015 shares of Common Stock (the “Warrant Shares”) at an initial exercise price \$3.83 per Warrant Share, for no additional consideration. The Company has paid a document preparation fee to the Investor of \$50,000.

The issuance and sale of the Investor Shares and the Warrants under the Purchase Agreement (and of the Warrant Shares issuable upon exercise or exchange of Issuer Warrants) is registered pursuant to the Company’s shelf registration statement on Form S-3 (File No. 333-173752).

The Purchase Agreement contains customary representations, warranties and covenants. In addition, the Purchase Agreement contains a prohibition on additional issuances of equity or equity-linked securities for 90 days, subject to certain exceptions.

Warrants

The Warrants have a three year term from the date of issuance and are exercisable at a price of \$3.83 per Warrant Share immediately from the date of issuance and include provisions governing adjustments to the number of Warrant Shares exercisable thereunder upon stock dividends, stock splits, and other events. The Warrants may be transferred by a holder thereof in accordance with applicable securities laws.

As an alternative to exercising the Warrants in whole or in part, beginning six months after the date of issuance, if the Common Stock is then trading at a price at or lower than the Warrant Share exercise price per share, a holder may, without the payment of additional consideration, exchange all or any portion of the Warrants based on a formula for a number of shares of Common Stock equal to the negotiated Black-Scholes value as defined below divided by the closing bid price of the Common Stock as of two trading days prior to such exchange (provided that if such closing bid price of the Common Stock is less than \$2.00 per share, it shall be deemed to be \$2.00 for purposes of this calculation).

The negotiated Black-Scholes value is defined as the value of an option for the number of shares equal to the portion of the Warrants being exchanged at the applicable exchange date as such value is calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the closing bid price of the Common Stock as of the trading day immediately preceding the date of issuance of the Warrants, (ii) a risk-free interest rate corresponding to the 5-Year U.S. Treasury Note Swap Rate, (iii) a strike price equal to the exercise price in effect at the time of the applicable exchange, (iv) an expected volatility equal to 135% and (v) a deemed remaining term of the Warrants of five years (regardless of the actual remaining term of the Warrants). The negotiated Black-Scholes value would only change based on changes in the risk-free interest rate corresponding to the 5-Year U.S. Treasury Note Swap Rate at the time of an exchange.

The number of shares of Common Stock that may be acquired by the holder upon any exercise of the Warrants will be limited to the extent necessary to ensure that, following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by the holder and its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder’s for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, does not exceed 9.9% of the total number of issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise), which is referred to as the beneficial ownership limitation.

In addition, the number of shares of Common Stock that may be acquired by the holder upon any exercise or exchange of the Warrants will be limited to the extent necessary to ensure that, following such exercise or exchange, the total number of shares of Common Stock issued in this offering (including shares issued in connection with prior Warrant exercises or exchanges) does not exceed 19.99% of our total issued and outstanding shares immediately preceding the closing of the Offering, and such 19.99% limitation is referred to as the share cap.

If the Company does not meet certain conditions, including (i) there is no effective registration statement registering, or the prospectus contained therein is not available for, the issuance of the shares of Common Stock underlying the Warrants to the holder, (ii) the shares of Common Stock underlying the Warrants are not freely tradeable by the holder without restriction, (iii) there is a limitation applicable with respect to the issuance of any shares of Common Stock underlying the Warrants (other than the beneficial ownership limitation or the share cap described above), (iv) the Company is not fully reporting under the Exchange Act, or (v) other conditions set forth in the Warrants, then the holder may, in its sole discretion, elect a cashless exercise in the exercise notice. The number of shares to be issued would be determined by a formula based on the total number of shares with respect to which the Warrants are being exercised, the closing sale price for a share of Common Stock on the trading day immediately preceding the day the Warrants exercise notice is received and the applicable exercise price of the Warrants.

Under certain circumstances, in the event that the Common Stock trades at a price that is 25% or more above the exercise price of the Warrants for a period of 20 of 30 consecutive trading days (with an average daily volume equal to or greater than \$1.0 million), the Company may require the holder of the Warrants to fully exercise the Warrants for cash (subject to certain additional conditions).

For as long as the Warrants are outstanding, the holder shall not engage in any short sales of the Common Stock, except certain short sale may be permissible if made one trading day prior to the exercise of such Warrants.

Placement Agent Agreement

In connection with the Offering, on September 19, 2013, the Company entered into a placement agent agreement (the "***Placement Agent Agreement***") with JMP Securities LLC (the "***Placement Agent***"), pursuant to which the Placement Agent agreed to act as the exclusive placement agent in the Offering. The Company agreed to pay the Placement Agent a fee equal to 3.33% of the gross proceeds of the sale of the shares of Common Stock and Warrants in the Offering to the Investor, or \$999,000, and to reimburse the Placement Agent for up to \$100,000 of its reasonable out-of-pocket expenses incurred in connection with the Offering.

The descriptions of the material terms of the Purchase Agreement, the Warrants, and the Placement Agent Agreement contained in this Report are qualified in their entirety by references to Exhibit 10.1, Exhibit 4.1, and Exhibit 10.2, respectively, which are incorporated herein by reference. The legal opinion and consent of Porter, Wright, Morris & Arthur LLP relating to the Shares, the Warrants, and the Warrant Shares is filed as Exhibit 5.1 to this Report and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<i>Exhibit Number</i>	<i>Exhibit Description</i>
4.1	Form of Warrant to purchase Common Stock by the Company in favor of the Investor.
5.1	Opinion of Porter, Wright, Morris & Arthur LLP.
10.1	Securities Purchase Agreement, dated September 24, 2013, by and between the Company and the Investor.
10.2	Placement Agent Agreement, dated September 19, 2013, by and between the Company and JMP Securities LLC.
23.1	Consent of Porter, Wright Morris & Arthur LLP (contained in Exhibit 5.1 above).
99.1	Press Release of the Company, dated September 24, 2013.

The Private Securities Litigation Reform Act of 1995 (the Act) provides a safe harbor for forward-looking statements made by or on behalf of the Company. Statements contained or incorporated by reference in this Current Report on Form 8-K, which relate to other than strictly historical facts, such as statements about the Company's plans and strategies, expectations for future financial performance, new and existing products and technologies, anticipated clinical and regulatory pathways, and markets for the Company's products are forward-looking statements within the meaning of the Act. The words "believe," "expect," "anticipate," "estimate," "project," and similar expressions identify forward-looking statements that speak only as of the date hereof. Investors are cautioned that such statements involve risks and uncertainties that could cause actual results to differ materially from historical or anticipated results due to many factors including, but not limited to, the Company's continuing operating losses, uncertainty of market acceptance of its products, reliance on third party manufacturers, accumulated deficit, future capital needs, uncertainty of capital funding, dependence on limited product line and distribution channels, competition, limited marketing and manufacturing experience, risks of development of new products, regulatory risks and other risks detailed in the Company's most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and other filings with the United States Securities and Exchange Commission. The Company undertakes no obligation to publicly update or revise any forward-looking statements.

SIGNATURES

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.

Navidea Biopharmaceuticals, Inc.

Date: September 24, 2013

By: /s/ Brent L. Larson

Brent L. Larson, Executive Vice President and
Chief Financial Officer

FORM OF WARRANT

NAVIDIA BIOPHARMACEUTICALS, INC.

Warrant To Purchase Common Stock

Warrant No.: _____

Date of Issuance: September 24, 2013 (“**Issuance Date**”)

Navidea Biopharmaceuticals, Inc., a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Crede CG III, Ltd., the registered holder hereof or its permitted assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined below) then in effect, upon exercise of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the “**Warrant**”), at any time or times on or after the Issuance Date but not after 11:59 p.m., New York time, on the Expiration Date (as defined below), 3,169,015 (subject to adjustment as provided herein) fully paid and non-assessable shares of Common Stock (as defined below) (the “**Warrant Shares**”). Except as otherwise defined herein, capitalized terms in this Warrant shall have the meanings set forth in Section 17. This Warrant is one of the Warrants to Purchase Common Stock (the “**SPA Warrants**”) issued pursuant to that certain Securities Purchase Agreement, dated as of September 24, 2013, by and among the Company and the investor(s) thereunder (the “**Buyer**” or “**Buyers**” as applicable) referred to therein (the “**Securities Purchase Agreement**”).

1. EXERCISE OF WARRANT.

(a) Mechanics of Exercise. Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section 1(f)), this Warrant may be exercised by the Holder on any day on or after the Issuance Date in whole or in part, by delivery (whether via facsimile or otherwise) of a written notice, in the form attached hereto as **Exhibit A** (the “**Exercise Notice**”), of the Holder’s election to exercise this Warrant. Within one (1) Trading Day following an exercise of this Warrant as aforesaid, the Holder shall deliver payment to the Company of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which this Warrant was so exercised (in respect of such specific exercise, the “**Aggregate Exercise Price**”) in cash or via wire transfer of immediately available funds if the Holder did not notify the Company in such Exercise Notice that such exercise was made pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall not be required to deliver the original of this Warrant in order to effect an exercise hereunder. Execution and delivery of an Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant certificate and issuance of a new Warrant certificate evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exercise Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant certificate after delivery of the Warrant Shares in accordance with the terms hereof. On or before the first (1st) Trading Day following the date on which the Company has received an Exercise Notice, the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of such Exercise Notice, in the form attached hereto as **Exhibit C**, to the Holder and the Company’s transfer agent (the “**Transfer Agent**”). On or before the third (3rd) Trading Day following the date on which the Company has received such Exercise Notice, the Company shall (X) provided that the Transfer Agent is participating in The Depository Trust Company (“**DTC**”) Fast Automated Securities Transfer Program (which the Company shall cause the Transfer Agent to do at Holder’s request), upon the request of the Holder, credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through DWAC, or (Y) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and deliver to the Holder or, at the Holder’s instruction pursuant to the Exercise Notice, the Holder’s agent or designee, in each case, sent by reputable overnight courier to the address as specified in the applicable Exercise Notice, a certificate, registered in the Company’s share register in the name of the Holder or its designee (as indicated in the applicable Exercise Notice), for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. Upon delivery of an Exercise Notice, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder’s DTC account or the date of delivery of the certificates evidencing such Warrant Shares (as the case may be). If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then, at the request of the Holder and upon surrender hereof by the Holder at the principal office of the Company, the Company shall as soon as practicable after any exercise and at its own expense, issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 8(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional shares of Common Stock are to be issued upon the exercise of this Warrant, but rather the number of shares of Common Stock to be issued shall be rounded up to the nearest whole number. The Company shall pay any and all taxes and fees which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant.

(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means \$3.83, subject to adjustment as provided herein.

(c) Company's Failure to Timely Deliver Securities. If the Company shall fail, for any reason or for no reason, to issue to the Holder within the later of (i) three (3) Trading Days after receipt of the applicable Exercise Notice or Exchange Notice, as applicable, and (ii) two (2) Trading Days after the Company's receipt of the Aggregate Exercise Price or valid notice of a Cashless Exercise, as applicable (such later date, the "**Share Delivery Deadline**"), a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company's share register or to credit the Holder's balance account with DTC for such number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise of this Warrant (as the case may be), and if on or after such Share Delivery Deadline the Holder (or any other Person in respect, or on behalf, of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of all or any portion of the number of shares of Common Stock, or a sale of a number of shares of Common Stock equal to all or any portion of the number of shares of Common Stock, issuable upon such exercise or exchange that the Holder so anticipated receiving from the Company, then, in addition to all other remedies available to the Holder, the Company shall, within three (3) Business Days after the Holder's request and in the Holder's discretion, either (i) pay cash to the Holder in an amount equal to the Holder's total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (including, without limitation, by any other Person in respect, or on behalf, of the Holder) (the "**Buy-In Price**"), at which point the Company's obligation to so issue and deliver such certificate or credit the Holder's balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise or exchange hereunder (as the case may be) (and to issue such shares of Common Stock) shall terminate, or (ii) promptly honor its obligation to so issue and deliver to the Holder a certificate or certificates representing such shares of Common Stock or credit the Holder's balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise or exchange hereunder (as the case may be) and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock multiplied by (B) the lowest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date of the applicable Exercise Notice or Exchange Notice, as the case may be, and ending on the date of such issuance and payment under this clause (ii).

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary (other than Section 1(f) below), if at the time of an exercise hereof any Equity Conditions Failure shall then exist, then the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to make a cashless exercise (each a "**Cashless Exercise**") under this paragraph (d). A Cashless Exercise under this paragraph (d) may be made, at the election of the Holder from time to time and irrespective of any other election to make a Cashless Exercise, so that upon such exercise Holder shall receive the "Net Number" of shares of Common Stock determined according to the following formula:

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

For purposes of the foregoing formula:

A= the total number of shares with respect to which this Warrant is then being exercised.

B= as applicable: (i) the Closing Sale Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 1(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 1(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b)(64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) the Bid Price of the Common Stock as of the time of the Holder’s execution of the applicable Exercise Notice if such Exercise Notice is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter pursuant to Section 1(a) hereof or (iii) the Closing Sale Price of the Common Stock on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 1(a) hereof after the close of “regular trading hours” on such Trading Day.

C= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

Notwithstanding anything to the contrary contained herein, exercise of this Warrant on a cashless basis may also be made from time to time at the election of the Holder (and irrespective of any election to make a Cashless Exercise under this paragraph (d)), pursuant to the exchange provisions of Section 5 of this Warrant.

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof (including, without limitation, the Net Number), the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed, provided that following such issuance to Holder such dispute shall be resolved in accordance with Section 14.

(f) Limitations on Exercises and Exchanges(g).

(i) Notwithstanding anything to the contrary contained in this Warrant, this Warrant shall not be exercisable or exchangeable by the Holder hereof to the extent (but only to the extent) that the Holder or any of its affiliates would beneficially own in excess of 9.9% (the “**Maximum Percentage**”) of the Common Stock. To the extent the above limitation applies, the determination of whether this Warrant shall be exercisable or exchangeable (vis-à-vis other convertible, exercisable or exchangeable securities owned by the Holder or any of its affiliates) and of which such securities shall be exercisable or exchangeable (as among all such securities owned by the Holder) shall, subject to such Maximum Percentage limitation, be determined on the basis of the first submission to the Company for conversion, exercise or exchange (as the case may be). No prior inability to exercise or exchange this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability or exchangeability. For the purposes of this paragraph, beneficial ownership and all determinations and calculations (including, without limitation, with respect to calculations of percentage ownership) shall be determined in accordance with Section 13(d) of the 1934 Act (as defined in the Securities Purchase Agreement) and the rules and regulations promulgated thereunder. The provisions of this paragraph shall be implemented in a manner otherwise than in strict conformity with the terms of this paragraph to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Maximum Percentage beneficial ownership limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such Maximum Percentage limitation. The limitations contained in this paragraph shall apply to a successor Holder of this Warrant. The holders of Common Stock shall be third party beneficiaries of this paragraph and the Company may not waive this paragraph without the consent of holders of a majority of its Common Stock. For any reason at any time, upon the written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding, including by virtue of any prior conversion or exercise or exchange of convertible or exercisable or exchangeable securities into Common Stock, including, without limitation, pursuant to this Warrant or securities issued pursuant to the Securities Purchase Agreement.

(i i) Principal Market Regulation. In order to comply with the rules and regulations of the Principal Market, the Company shall not issue any shares of Common Stock upon exercise or exchange of this Warrant if the issuance of such shares of Common Stock would, when added to the number of Common Shares (as defined in the Securities Purchase Agreement) issued pursuant to the Securities Purchase Agreement and the SPA Warrants, exceed 24,449,301 shares of Common Stock in the aggregate (the “**Exchange Cap**”), based upon the total issued and outstanding number of shares of common stock as of the preceding trading day of the Issuance Date, except that such limitation shall not apply in the event that the Company (A) obtains the approval of its stockholders as required by the applicable rules of the Principal Market for issuances of shares of Common Stock in excess of such amount, or (B) is no longer traded on the Principal Market. For so long as the Exchange Cap is applicable, no Buyer shall be issued in the aggregate, upon exercise or exchange of any SPA Warrants, shares of Common Stock in an amount greater than the product of (i) the Exchange Cap multiplied by (ii) the quotient of (1) the Purchase Price paid by such Buyer pursuant to the Securities Purchase Agreement divided by (2) the Purchase Price paid by all Buyers pursuant to the Securities Purchase Agreement (with respect to each Buyer, the “**Exchange Cap Allocation**”). In the event that any Buyer shall sell or otherwise transfer any of such Buyer’s SPA Warrants, the transferee shall be allocated a pro rata portion of such Buyer’s Exchange Cap Allocation with respect to such portion of such SPA Warrants so transferred, and the restrictions in this Section 1(f)(ii) shall apply to such transferee with respect to the portion of the Exchange Cap Allocation so allocated to such transferee. Upon exercise or exchange in full of a holder’s SPA Warrants, the difference (if any) between such holder’s Exchange Cap Allocation and the number of shares of Common Stock actually issued to such holder upon such holder’s exercise or exchange in full of such SPA Warrants shall be allocated to the respective Exchange Cap Allocations of the remaining holders of SPA Warrants on a pro rata basis in proportion to the shares of Common Stock underlying the SPA Warrants then held by each such holder.

(g) Insufficient Authorized Shares. The Company shall at all times keep reserved for issuance under this Warrant a number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock hereunder (without regard to any limitation otherwise contained herein with respect to the number of shares of Common Stock that may be acquirable upon exercise or exchange of this Warrant). If, notwithstanding the foregoing, and not in limitation thereof, at any time while any of the SPA Warrants remain outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance upon exercise or exchange of the SPA Warrants at least a number of shares of Common Stock equal to the number of shares of Common Stock as shall from time to time be necessary to effect the exercise or exchange of all of the SPA Warrants then outstanding (the "**Required Reserve Amount**") (an "**Authorized Share Failure**"), then the Company shall immediately take all action necessary to increase the Company's authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for all the SPA Warrants then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than ninety (90) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its reasonable efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock.

(h) Activity Restrictions.

(i) For so long as Holder or any of its Affiliates holds any Warrants or any Warrant Shares, neither Holder nor any Affiliate will: (i) vote any shares of Common Stock beneficially owned by it, solicit any proxies, or seek to advise or influence any Person with respect to any voting securities of the Company; (ii) engage or participate in any actions, plans or proposals which relate to or would result in (a) acquiring additional securities of the Company, alone or together with any other Person, which would result in Buyer or its Affiliates beneficially owning (within the meaning of Section 13(d) under the 1934 Act) more than 9.9% of the Common Stock, (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving Company or any of its Subsidiaries, (c) a sale or transfer of a material amount of assets of the Company or any of its Subsidiaries, (d) any change in the present board of directors or management of the Company, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board, (e) any material change in the present capitalization or dividend policy of the Company, (f) any other material change in the Company's business or corporate structure, including but not limited to, if the Company is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by Section 13 of the Investment Company Act of 1940, (g) changes in the Company's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Company by any Person, (h) causing a class of securities of the Company to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association, (i) a class of equity securities of the Company becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act, or (j) any action, intention, plan or arrangement similar to any of those enumerated above; or (iii) request the Company or its directors, officers, employees, agents or representatives to amend or waive any provision of this paragraph. The restrictions contained in this Section 1(h)(i) shall not limit Holder's rights to enforce its rights or exercise its rights as to the Securities or under this Warrant or the Transaction Documents.

(ii) Provided that no Equity Condition Failure shall have occurred, if the trading price on the Principal Market at the time of an exercise of this Warrant is greater than the then applicable Exercise Price then in effect, then in respect of such particular exercise Holder may only exercise this Warrant for a cash exercise price (and not by means of a Cashless Exercise under Section 1(d) above or on a cashless basis under Section 5 below).

2 . ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 2.

(a) Stock Dividends and Splits. Without limiting any provision of Section 4, if the Company, at any time on or after the date of the Securities Purchase Agreement, (i) pays a stock dividend on one or more classes of its then outstanding shares of Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its then outstanding shares of Common Stock into a larger number of shares or (iii) combines (by combination, reverse stock split or otherwise) one or more classes of its then outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination. If any event requiring an adjustment under this paragraph occurs during the period that an Exercise Price is calculated hereunder, then the calculation of such Exercise Price shall be adjusted appropriately to reflect such event.

(b) [Intentionally Omitted].

(c) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section 2, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment (without regard to any limitations on exercise contained herein). In addition, and notwithstanding anything to the contrary contained herein, upon an Exchange as set forth in Section 5 hereof, the number of Warrant Shares for which this Warrant is exercisable immediately following such Exchange shall be equal to (i) the number of Warrant Shares for which this Warrant was exercisable immediately prior to such Exchange less (ii) the number of Warrant Shares under the portion of the Warrant exchanged in Exchange (e.g., if this Warrant is exercisable (without regard to limitations hereunder) for 100 shares immediately prior to an Exchange and 30% of the Warrant is submitted for Exchange (i.e., the Warrant to acquire 30 Warrant Shares is submitted for Exchange), then this Warrant will be exercisable for 70 Warrant Shares immediately following the completion of such Exchange), and the number of such Warrant Shares issuable hereunder shall automatically be adjusted, as necessary, to enable to the Company to comply with its obligations to issue the full Exchange Number under Section 5 hereof upon any Exchange hereunder.

(d) Calculations. All calculations under this Section 2 shall be made by rounding to the nearest 1/10000th of cent and the nearest 1/100th of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issue or sale of Common Stock.

(e) Other Events. In the event that the Company (or any Subsidiary (as defined in the Securities Purchase Agreement)) shall take any action to which the provisions hereof are not strictly applicable, or, if applicable, would not operate to protect the Holder from dilution or if any event occurs of the type contemplated by the provisions of this Section 2 but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, phantom stock rights or other rights with equity features), then the Company's board of directors shall in good faith determine and implement an appropriate adjustment in the Exercise Price and the number of Warrant Shares (if applicable) so as to protect the rights of the Holder, provided that no such adjustment pursuant to this Section 2(e) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2, provided further that if the Holder does not accept such adjustments as appropriately protecting its interests hereunder against such dilution, then the Company's board of directors and the Holder shall agree, in good faith, upon an independent investment bank of nationally recognized standing to make such appropriate adjustments, whose determination shall be final and binding and whose fees and expenses shall be borne by the Company.

3. [Intentionally Omitted].

4 . FUNDAMENTAL TRANSACTIONS. The Company shall not enter into or be party to a Fundamental Transaction unless the Successor Entity assumes in writing all of the obligations of the Company under this Warrant and the other Transaction Documents related to this Warrant in accordance with the provisions of this Section 4 pursuant to written agreements in form and substance satisfactory to the Holder and approved by the Holder prior to such Fundamental Transaction, including agreements confirming the obligations of the Successor Entity as set forth in this Section and elsewhere in this Warrant and an obligation to deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, which is exercisable for a corresponding number of shares of capital stock equivalent to the shares of Common Stock acquirable and receivable upon exercise or exchange of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such adjustments to the number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction). Notwithstanding the foregoing, at the election of the Holder upon exercise or exchange of this Warrant following a Fundamental Transaction, the Successor Entity shall deliver to the Holder, in lieu of the shares of Common Stock (or other securities, cash, assets or other property issuable upon the exercise of this Warrant prior to the applicable Fundamental Transaction, such shares of common stock (or its equivalent) of the Successor Entity (including its Parent Entity), or other securities, cash, assets or other property, which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had this Warrant been exercised or exchanged immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of this Warrant). The provisions of this Section 4 shall apply similarly and equally to successive Fundamental Transactions and shall be applied as if this Warrant (and any such subsequent warrants issued hereunder) were fully exercisable or exchangeable and without regard to any limitations on the exercise or exchange of this Warrant (provided that the Holder shall continue to be entitled to the benefit of the Maximum Percentage, applied however with respect to shares of capital stock registered under the 1934 Act and thereafter receivable upon exercise of this Warrant (or any such other warrant)).

5 . EXCHANGE RIGHTS. In addition to the rights of the Holder under Section 1 hereof, this Warrant shall be exchangeable by the Holder on a cashless basis as further set forth below (and subject to the limitations set forth in Section 1(h)(ii) hereof).

(a) Exchange Right. The Holder shall be entitled at any time and from time to time from and after the six (6) month anniversary of the Issuance Date and prior to the Expiration Date, by written notice to the Company in the form of **Exhibit B** attached hereto (an **“Exchange Notice”**) to exchange (an **“Exchange”**) all or any portion of this Warrant for fully paid and non-assessable shares of Common Stock, all as further set forth in this Section 5.

(b) Exchange Number. The number of shares of Common Stock issuable in respect of such Exchange shall be determined by dividing (x) the Exchange Amount (as defined below) in respect of such Exchange by (y) the Exchange Price (as defined below) in respect of such Exchange (such number of shares of Common Stock so issuable being the **“Exchange Number”**).

(c) Definitions.

(i) **“Exchange Amount”** means the Black-Scholes Exchange Value of the portion of the Warrant being exchanged pursuant to Section 5(a), determined as of the applicable Exchange Date (as defined below).

(ii) **“Exchange Price”** means the Closing Bid Price as of two (2) Trading Days prior to the Exchange Date; provided that for purposes of calculating the Exchange Number, the Exchange Price shall be no less than Two Dollars (\$2.00).

(d) Mechanics of Exchange.

(i) Optional Exchange. To exchange any Exchange Amount on any date (an “**Exchange Date**”), the Holder shall transmit by facsimile (or otherwise deliver), for receipt on such date, a copy of an executed Exchange Notice. The Holder shall not be required to deliver the original of this Warrant in order to effect an exchange hereunder. Execution and delivery of an Exchange Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exchange Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant after delivery of the Warrant Shares in accordance with the terms hereof.

(ii) Exchange for Shares of Common Stock. Within one (1) Trading Day following the date on which the Company has received an Exchange Notice, the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of such Exchange Notice, in the form attached hereto as Exhibit C, to the Holder and the Transfer Agent. On or before the third (3rd) Trading Day following the date on which the Company has received such Exchange Notice, the Exchange Number of shares of Common Stock shall be issued to Holder, or at Holder’s instruction, as if such shares of Common Stock were issuable upon an exercise under Section 1 hereof.

(i i i) Disputes. Dispute as to the determination of the Exchange Amount, the Exchange Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof, and shares subject to such dispute, shall be handled in the same manner as for disputes under Section 1(e) hereof.

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

7. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in its capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in its capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which it is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 7, the Company shall provide the Holder with copies of the same notices and other information given to the stockholders of the Company generally, contemporaneously with the giving thereof to the stockholders; provided that the Company shall not be obligated to provide such information if it is filed with the SEC through EDGAR and available to the public through the EDGAR system.

8. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 8(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 8(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant (as to which a written certification and the indemnification contemplated below shall suffice as such evidence), and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary and reasonable form and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 8(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 8(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, no warrants for fractional shares of Common Stock shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 8(a) or Section 8(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

9 . NOTICES. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in accordance with Section 9(f) of the Securities Purchase Agreement. The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant, including in reasonable detail a description of such action and the reason therefor. Without limiting the generality of the foregoing, the Company will give written notice to the Holder (i) as soon as practicable upon each adjustment of the Exercise Price and the number of Warrant Shares, setting forth in reasonable detail, and certifying, the calculation of such adjustment(s) and (ii) at least fifteen (15) days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, (B) with respect to any grants, issuances or sales of any Options, Convertible Securities or rights to purchase stock, warrants, securities, indebtedness, or other property pro rata to holders of shares of Common Stock or (C) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation, provided in each case that such information (to the extent it constitutes, or contains, material, non-public information regarding the Company or any of its Subsidiaries) shall be made known to the public prior to or in conjunction with such notice being provided to the Holder and (iii) at least ten (10) Trading Days prior to the consummation of any Fundamental Transaction. To the extent that any notice provided hereunder (whether under this Section 9 or otherwise) constitutes, or contains, material, non-public information regarding the Company or any of its Subsidiaries, the Company shall simultaneously file such notice with the SEC (as defined in the Securities Purchase Agreement) pursuant to a Current Report on Form 8-K. It is expressly understood and agreed that the time of execution specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

10. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant (other than Section 1(f) may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder. No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party.

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

12. **GOVERNING LAW.** This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. Each of the Holder and the Company hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude either the Holder or the Company from bringing suit or taking other legal action against the Holder or the Company in any other jurisdiction to enforce a judgment or other court ruling in favor of the Holder or the Company. **EACH OF THE HOLDER AND THE COMPANY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

13. **CONSTRUCTION; HEADINGS.** This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant. Terms used in this Warrant but defined in the other Transaction Documents shall have the meanings ascribed to such terms on the Closing Date (as defined in the Securities Purchase Agreement) in such other Transaction Documents unless otherwise consented to in writing by the Holder.

14 . DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value or the arithmetic calculation of the Warrant Shares (as the case may be), the Company or the Holder (as the case may be) shall submit the disputed determinations or arithmetic calculations (as the case may be) via facsimile (i) within two (2) Business Days after receipt of the applicable notice giving rise to such dispute to the Company or the Holder (as the case may be) or (ii) if no notice gave rise to such dispute, at any time after the Holder or the Company (as the case may be) learned of the circumstances giving rise to such dispute. If the Holder and the Company are unable to agree upon such determination or calculation (as the case may be) of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value or the number of Warrant Shares (as the case may be) within three (3) Business Days of such disputed determination or arithmetic calculation being submitted to the Company or the Holder (as the case may be), then the Company shall, within two (2) Business Days submit via facsimile (a) the disputed arithmetic calculation of the Warrant Shares, the disputed determination of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value (as the case may be) to an independent, reputable investment bank selected by the Holder and the Company or (b) if acceptable to the Holder, the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause at its expense the investment bank or the accountant (as the case may be) to perform the determinations or calculations (as the case may be) and notify the Company and the Holder of the results no later than ten (10) Business Days from the time it receives such disputed determinations or calculations (as the case may be). Such investment bank's or accountant's determination or calculation (as the case may be) shall be binding upon all parties absent demonstrable error.

15 . REMEDIES, CHARACTERIZATION, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant and the other Transaction Documents, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual and consequential damages for any failure by the Company to comply with the terms of this Warrant. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, exercises and the like (and the computation thereof) shall be the amounts to be received by the Holder and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required. The Company shall provide all information and documentation to the Holder that is reasonably requested by the Holder to enable the Holder to confirm the Company's compliance with the terms and conditions of this Warrant (including, without limitation, compliance with Section 2 hereof). The issuance of shares and certificates for shares as contemplated hereby upon the exercise of this Warrant shall be made without charge to the Holder or such shares for any issuance tax or other costs in respect thereof, provided that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than the Holder or its agent on its behalf.

16. TRANSFER. This Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company. In order to validly exercise this Warrant, any Holder other than the original Holder of this Warrant must, concurrently with or prior to the delivery of an Exercise Notice to the Company, provide the Company with definitive documentation conclusively evidencing, in the Company's reasonable discretion, that the Person delivering such Exercise Notice is the actual owner of this Warrant possessing the right to cause the exercise hereof.

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

(a) **“Bid Price”** means, for any security as of the particular time of determination, the bid price for such security on the Principal Market as reported by Bloomberg as of such time of determination, or, if the Principal Market is not the principal securities exchange or trading market for such security, the bid price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg as of such time of determination, or if the foregoing does not apply, the bid price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg as of such time of determination, or, if no bid price is reported for such security by Bloomberg as of such time of determination, the average of the bid prices of all of the market makers for such security as reported in the “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC) (the **“Pink Sheets”**) as of such time of determination. If the Bid Price cannot be calculated for a security as of the particular time of determination on any of the foregoing bases, the Bid Price of such security as of such time of determination shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 14. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(b) **“Black Scholes Exchange Value”** means the value of an option for the number of shares equal to the portion of the Warrant being exchanged at the applicable Exchange Date as set forth in the applicable Exchange Notice as such value is determined calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the Closing Bid Price of the Common Stock as of the Trading Day immediately preceding the Issuance Date (adjusted upward to the same extent that the Exercise Price hereunder has been adjusted upward pursuant to Section 2(a) hereof), (ii) a risk-free interest rate corresponding to the five (5) year U.S. Treasury Note swap rate as of such Exchange Date, (iii) a strike price equal to the Exercise Price in effect at the time of the applicable Exchange, (iv) an expected volatility equal to 135% and (v) a deemed remaining term of the Warrant of five (5) years (regardless of the actual remaining term of the Warrant).

(c) **“Bloomberg”** means Bloomberg, L.P.

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

(e) “**Closing Bid Price**” and “**Closing Sale Price**” means, for any security as of any date, the last closing bid price and the last closing trade price, respectively, for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing bid price or the closing trade price (as the case may be) then the last bid price or last trade price, respectively, of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last closing bid price or last trade price, respectively, of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not apply, the last closing bid price or last trade price, respectively, of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no closing bid price or last trade price, respectively, is reported for such security by Bloomberg, the average of the bid prices, or the ask prices, respectively, of all of the market makers for such security as reported in the Pink Sheets. If the Closing Bid Price or the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Bid Price or the Closing Sale Price (as the case may be) of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 14. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(f) “**Common Stock**” means (i) the Company’s shares of common stock, \$0.001 par value per share, and (ii) any capital stock into which such common stock shall have been changed or any share capital resulting from a reclassification of such common stock.

(g) “**Convertible Securities**” means any stock or other security (other than Options) that is at any time and under any circumstances, directly or indirectly, convertible into, exercisable or exchangeable for, or which otherwise entitles the holder thereof to acquire, any shares of Common Stock.

(h) “**Eligible Market**” means the New York Stock Exchange, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or the Principal Market.

(i) “**Equity Conditions**” means: (i) the Company shall have complied in all material respects with all applicable securities laws and regulations and all rules and regulations of the applicable Eligible Market in respect of the offer, sale and issuance of the Securities under the Transaction Documents, (ii) the Common Stock (including all shares of Common Stock to be received by Holder) shall be listed or designated for quotation (as applicable) on an Eligible Market and no Trading Market Event (or event which with notice or passage of time would be a Trading Market Event) has occurred, nor shall delisting or suspension by an Eligible Market be pending or threatened and still pending, (iii) the Company shall be in compliance in all material respects with all of its obligations under all of the Transaction Documents, (iv) each of the Registration Statement and the Prospectus contained therein (each as defined in the Securities Purchase Agreement) shall continue to be effective and fully available for use with respect to issuance of all of the Securities, including, without limitation, any issuance of Warrant Shares pursuant to a cash exercise hereof, including without limitation a Mandatory Exercise under Section 18, (v) all Common Shares and Warrant Shares (including any Warrant Shares to be received upon exercise or exchange of this Warrant and including any Warrant Shares to be issued in a cash exercise) shall be then (or upon such issuance (as the case may be)) freely tradeable by Holder without restriction of any kind or nature (and the Company shall have no knowledge of any fact which would reasonably be expected to negate the foregoing in the foreseeable future), (vi) no limitation shall be applicable with respect to the issuance of any Warrant Shares hereunder (other than under Section 1(f)(i)), (vii) the Company is fully reporting under the 1934 Act and Rule 144 of the 1933 Act (as defined in the Securities Purchase Agreement) and has been such on a timely basis (without extension) for the 15 months immediately preceding the date of determination, and (viii) all Common Shares and all Warrant Shares shall have been properly and timely delivered under the Securities Purchase Agreement and this Warrant, including without limitation, all Warrant Shares issuable under Section 5 hereof and all Common Shares and Warrant Shares have been, and will be, delivered via DWAC. For purposes hereof a “**Trading Market Event**” shall mean if the Company or the Common Stock or any shares of Common Stock issued or issuable hereunder or under any other Transaction Document shall cease or fail to be listed for trading or quoted on an Eligible Market.

(j) **“Equity Conditions Failure”** means that on any applicable date of determination, any of the Equity Conditions have not been then satisfied.

(k) **“Expiration Date”** means the date that is the third (3rd) anniversary of the Issuance Date or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a **“Holiday”**), the next date that is not a Holiday.

(l) **“Fundamental Transaction”** means that (i) the Company shall, directly or indirectly, in one or more related transactions, (1) consolidate or merge with or into (whether or not the Company is the surviving corporation) any other Person unless the stockholders of the Company immediately prior to such consolidation or merger continue to hold more than 50% of the outstanding shares of Voting Stock after such consolidation or merger, or (2) sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of its properties or assets to any other Person, or (3) allow any other Person to make a purchase, tender or exchange offer that is accepted by the holders of more than 50% of the outstanding shares of Voting Stock of the Company (not including any shares of Voting Stock of the Company held by the Person or Persons making or party to, or associated or affiliated with the Persons making or party to, such purchase, tender or exchange offer), or (4) consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with any other Person whereby such other Person acquires more than 50% of the outstanding shares of Voting Stock of the Company (not including any shares of Voting Stock of the Company held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination), or (ii) any “person” or “group” (as these terms are used for purposes of Sections 13(d) and 14(d) of the 1934 Act and the rules and regulations promulgated thereunder) is or shall become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, of 50% of the aggregate ordinary voting power represented by issued and outstanding Voting Stock of the Company.

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

(n) **“Parent Entity”** of a Person means an entity that, directly or indirectly, controls the applicable Person and whose common stock or equivalent equity security is quoted or listed on an Eligible Market, or, if there is more than one such Person or Parent Entity, the Person or Parent Entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

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

(p) **“Principal Market”** means the NYSE MKT.

(q) **“Successor Entity”** means the Person (or, if so elected by the Holder, the Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or the Person (or, if so elected by the Holder, the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(r) **“Trading Day”** means, as applicable, (x) with respect to all price determinations relating to the Common Stock, any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded, provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time) unless such day is otherwise designated as a Trading Day in writing by the Holder or (y) with respect to all determinations other than price determinations relating to the Common Stock, any day on which The New York Stock Exchange (or any successor thereto) is open for trading of securities.

(s) **“Voting Stock”** of a Person means capital stock of such Person of the class or classes pursuant to which the holders thereof have the general voting power to elect, or the general power to appoint, at least a majority of the board of directors, managers or trustees of such Person (irrespective of whether or not at the time capital stock of any other class or classes shall have or might have voting power by reason of the happening of any contingency).

18. **MANDATORY EXERCISE.** If at any time after the six (6) month anniversary of the Issuance Date (the “**Mandatory Exercise Eligibility Date**”), (i) the Closing Bid Price of the Common Stock is equal to or greater than 125% of the Exercise Price then in effect (the “**Trigger Price**”) for at least twenty (20) Trading Days during any thirty (30) consecutive Trading Day Period that begins following the Mandatory Exercise Eligibility Date (the thirty (30) consecutive Trading Day period during which the condition in this clause (i) is satisfied is referred to herein as the “**Measuring Period**” and each Trading Day during the Measuring Period on which the Closing Bid Price of the Common Stock is equal to or greater than the Trigger Price is referred to herein as an “**Eligible Trading Day**”), (ii) no Equity Conditions Failure shall have occurred during the applicable Measuring Period, (iii) the aggregate dollar trading volume (as reported on Bloomberg) of the Common Stock on the applicable Eligible Market for each Eligible Trading Day during the applicable Measuring Period exceeds one million dollars (\$1,000,000) per day, then the Company shall have the right to require the Holder to exercise for cash all, but not less than all, of this Warrant for all of the then-remaining Warrant Shares as further set forth below. The Company may exercise its right to require exercise under this Section 18 (the “**Mandatory Exercise Right**”) on one occasion (or, if the Holder delivers to the Company a Blocker Notice (as defined below), such number of additional occasions as necessary to permit a Mandatory Exercise with respect to the entire amount of Warrant Shares issuable hereunder). The Company shall exercise its Mandatory Exercise Right (to the extent permitted hereby) by delivering, within ten (10) Trading Days following the end of the Measuring Period, a written notice thereof by facsimile and overnight courier to the Holder (the “**Mandatory Exercise Notice**” and the date such notice by facsimile is deemed to be delivered in accordance with Section 9(f) of the Securities Purchase Agreement is referred to as the “**Mandatory Exercise Notice Date**”). The Mandatory Exercise Notice shall be irrevocable. The Mandatory Exercise Notice shall (1) state the Trading Day selected for the Mandatory Exercise in accordance with this Section 18, which Trading Day shall be at least five (5) Trading Days but not more than fifteen (15) Trading Days following the Mandatory Exercise Notice Date (the “**Mandatory Exercise Date**”), (2) state the number of shares of Common Stock to be issued to the Holder on the Mandatory Exercise Date and (3) contain a certification from the Chief Executive Officer of the Company that there has been no Equity Conditions Failure as of the Mandatory Exercise Notice Date. Any portion of this Warrant exercised by the Holder after the Mandatory Exercise Notice Date shall reduce the number of Warrant Shares for which this Warrant is required to be exercised on the Mandatory Exercise Date. If the Company has elected a Mandatory Exercise, the mechanics of exercise set forth in Section 1 shall apply, to the extent applicable, as if the Company had received from the Holder on the Mandatory Exercise Date an Exercise Notice with respect to all of the then-remaining Warrant Shares (or the Permitted Exercise Amount (as defined below) of Warrant Shares, as applicable). Notwithstanding anything contained in this Section 18 to the contrary, if an Equity Conditions Failure occurs on any day during the period commencing on the Mandatory Exercise Notice Date and ending on the Mandatory Exercise Date, then the Mandatory Exercise Notice delivered to the Holder shall be null and void ab initio and the Mandatory Exercise shall not occur and the Mandatory Exercise Right shall not be available to the Company unless and until the conditions precedent to such Mandatory Exercise Right are again satisfied. If the Company elects to cause a mandatory exercise of this Warrant pursuant to this Section 18, then it must simultaneously take the same action with respect to all of the other SPA Warrants, if any, held by any person other than Holder. Notwithstanding anything contained in this Section 18 to the contrary, an effort by the Company to exercise its right under this Section 18 shall be stayed to the extent the Holder delivers a written notice to the Company stating that such exercise would result in a violation of Section 1(f) (a “**Blocker Notice**”), which Blocker Notice may be delivered at any time prior to the Mandatory Exercise Date, in which case the Company shall have the right to require the Holder to exercise this Warrant for such number of Warrant Shares that may be exercised hereunder without violating Section 1(f) (the “**Permitted Exercise Amount**”) and from time to time thereafter the Holder shall exercise this Warrant (so long as no Equity Conditions Failure has occurred from and after the Mandatory Exercise Notice Date) in such amounts and from time to time until fully exercised, subject to ongoing compliance with Section 1(f) hereof and subject to Holder’s rights hereunder and the other terms and conditions hereof following the Mandatory Exercise Date. For clarification, if an Equity Condition Failure shall occur, this Section 18 shall thereafter no longer be effective and Holder shall thereafter have no obligations under this Section 18.

[signature page follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

NAVIDEA BIOPHARMACEUTICALS, INC.

By: _____

Name:

Title:

EXERCISE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS
WARRANT TO PURCHASE COMMON STOCK

NAVIDEA BIOPHARMACEUTICALS, INC.

The undersigned holder hereby exercises the right to purchase _____ of the shares of Common Stock (“**Warrant Shares**”) of Navidea Biopharmaceuticals, Inc., a Delaware corporation (the “**Company**”), evidenced by Warrant to Purchase Common Stock No. _____ (the “**Warrant**”). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

_____ a “Cash Exercise” with respect to _____
Warrant Shares; and/or

_____ a “Cashless Exercise” with respect to _____
Warrant Shares.

In the event that the Holder has elected a Cashless Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the Holder hereby represents and warrants that (i) this Exercise Notice was executed by the Holder at _____ [a.m.][p.m.] on the date set forth below and (ii) if applicable, the Bid Price as of such time of execution of this Exercise Notice was \$_____.

2 . Payment of Exercise Price. In the event that the Holder has elected a Cash Exercise with respect to some or all of the Warrant Shares, the Holder shall pay the Aggregate Exercise Price in the sum of \$_____ to the Company in accordance with the terms of the Warrant.

3 . Delivery of Warrant Shares and Net Number of shares of Common Stock. The Company shall deliver to Holder, or its designee or agent as specified below, _____ shares of Common Stock in respect of the exercise contemplated hereby. Delivery shall be made to Holder, or for its benefit, to the following address:

Date: _____, _____

Name of Registered Holder

By: _____

Name:
Title:

Account Number: _____
(if electronic book entry transfer)

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

EXCHANGE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXCHANGE THIS
WARRANT TO PURCHASE COMMON STOCK

NAVIDEA BIOPHARMACEUTICALS, INC.

The undersigned holder hereby exercises the right to exchange the Warrant to Purchase Common Stock No. _____ (the "Warrant") of Navidea Biopharmaceuticals, Inc., a Delaware corporation (the "Company") as described. Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

Date of Exchange: _____

19. The total number of shares with respect to which this Warrant is being exchanged: _____

20. Black Scholes Exchange Value (as defined in Section 17) for an option to purchase _____ [SAME # AS FROM 1 ABOVE] shares of Common Stock: \$ _____.

Resulting Exchange Amount: \$ _____ [insert from item 2 above]

21. Exchange Price: Closing Bid Price of the Common Stock as of two (2) Trading Days prior to the date of Exchange (as such Closing Bid Price is defined in Section 17 herein); provided that for purposes of calculating the Exchange Number, the Exchange Price shall be no less than two dollars (\$2.00): \$ _____.

Resulting Exchange Number [Exchange Amount/Exchange Price as set forth in 3 above]: _____ shares of Common Stock

Account for Wire Transfer: _____

Account for Share issuance (if Company is permitted to elect and so elects): _____

Date: _____, _____

Name of Registered Holder

By: _____

Name:

Title:

ACKNOWLEDGMENT

The Company hereby acknowledges this [Exercise Notice][Exchange Notice] and hereby directs _____ to issue the above indicated number of shares of Common Stock in accordance with the Transfer Agent Instructions dated _____, 20__, from the Company and acknowledged and agreed to by _____.

NAVIDEA BIOPHARMACEUTICALS, INC.

By:

Name:

Title:

Porter Wright
Morris & Arthur LLP
41 South High Street
Suites 2800-3200
Columbus, Ohio 43215-6194

Direct: (614) 227-2000
Fax: 614-227-2100
Toll free: 800-533-2794

September 24, 2013

Navidea Biopharmaceuticals, Inc.
425 Metro Place North
Suite 300
Dublin, OH 43017-1367

Ladies and Gentlemen:

We have acted as counsel to Navidea Biopharmaceuticals, Inc. a Delaware corporation (the "Company"), in connection with the proposed offer and sale by the Company of 10,563,381 shares (the "Shares") of the Company's common stock, \$0.001 par value per share (the "Common Stock"), and warrants to purchase up to 3,169,015 shares of the Company's Common Stock (the "Warrants"), and the shares of the Common Stock issuable upon exercise of the Warrants (the "Warrant Shares" and, collectively with the Warrants and Shares, the "Securities"), pursuant to that certain Securities Purchase Agreement, dated September 24, 2013 (the "Agreement"), among the Company and the purchasers thereunder. The Securities are being issued pursuant to a Registration Statement on Form S-3 (File No. 333-173752) (the "Registration Statement"), which was declared effective by the Securities and Exchange Commission (the "Commission") on May 9, 2011, under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (the "Act"), and the base Prospectus dated May 9, 2011 and the Prospectus Supplement, dated September 24, 2013, filed with the Commission.

In connection with rendering the opinions set forth below, we have examined (i) the Agreement, (ii) the Amended and Restated Certificate of Incorporation of the Company, as corrected and amended; (iii) the Amended and Restated Bylaws of the Company, (iv) the form of the Warrants, (v) the Registration Statement, including the exhibits filed therewith, (vi) authorizing resolutions and other actions of the Company that authorize and provide for the issuance of the Securities. We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates of public officials, certificates of officers or other representatives of the Company and others, and such other documents, and have considered such matters of law and fact, in each case as we have deemed appropriate to render the opinions contained herein. With respect to certain facts, we have considered it appropriate to rely upon certificates or other comparable documents of public officials and officers or other appropriate representatives of the Company without investigation or analysis of any underlying data contained therein.

For the purposes of this opinion letter, we have assumed that (i) each document submitted to us is accurate and complete; (ii) each such document that is an original is authentic; (iii) each such document that is a copy conforms to an authentic original; and (iv) all signatures (other than signatures on behalf of the Company) on each such document are genuine. We have further assumed the legal capacity of natural persons, and we have assumed that each party to the documents we have examined or relied on (other than the Company) has the legal capacity or authority and has satisfied all legal requirements that are applicable to that party to the extent necessary to make such documents enforceable against that party. We have not verified any of the foregoing assumptions.

Our examination of law relevant to the matters covered by this opinion is limited to the State of Ohio and the corporate laws of the State of Delaware, including statutory provisions and all applicable provisions of the Delaware Constitution, and reported judicial decisions interpreting such laws of the States of Delaware and Ohio, and federal laws of the United States of America. and we express no opinion as to the effect on the matters covered by this opinion of the laws of any other jurisdiction. Except as stated in the previous sentence, we are not opining on, and we assume no responsibility for, the applicability to or effect on any of the matters covered herein of (i) any other laws, including the laws of the State of Delaware (except for its corporate laws set forth above); (ii) the laws of any other jurisdiction; or (iii) the law of any county, municipality or other political subdivision or local governmental agency or authority.

Based upon the foregoing and our examination of such questions of law as we have deemed necessary or appropriate for the purpose of our opinion, and subject to the assumptions, limitations and qualifications expressed herein, it is our opinion that:

- (1) The Shares, when sold and delivered in accordance with the Agreement and after receipt of payment therefor, will be validly issued, fully paid and non-assessable.
- (2) The Warrant Shares, when issued upon valid exercise of the Warrants in accordance the terms of such Warrants and after receipt of payment therefor, will be validly issued, fully paid and non-assessable.
- (3) The Warrants have been duly authorized by all necessary corporate action on the part of the Company, executed and delivered by the Company and constitute legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting creditors' rights generally, and by general principles of equity including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance or injunctive relief, regardless of whether considered in a proceeding in equity or at law.

The opinions expressed herein are subject to the following assumptions, limitations and qualifications:

- (a) We have assumed that (i) the Registration Statement, and any amendments thereto, will remain effective during the period when the Securities are offered, sold or issued, including upon exercise of the Warrants and (ii) the Warrants will be issued in the form we have reviewed and will have been signed by a duly authorized signatory.
- (b) As noted, the enforceability of the Warrants is subject to the effect of general principles of equity. As applied to the Warrants, these principles will require the parties thereto to not invoke penalties for defaults that bear no reasonable relation to the damage suffered or that would otherwise work a forfeiture.
- (c) The effectiveness of indemnities, rights of contribution, exculpatory provisions, choice of venue or jurisdiction provisions, waiver of jury trials, and waivers of the benefits of statutory provisions may be limited on public policy grounds.
- (d) Provisions of the Warrants requiring that waivers must be in writing may not be binding or enforceable if a non-executory oral agreement has been created modifying any such provision or an implied agreement by trade practice or course of conduct has given rise to a waiver.

We assume no obligation to update or supplement any of our opinions to reflect any changes of law or fact that may occur.

Navidea Biopharmaceuticals, Inc.
September 24, 2013
Page 3

We hereby consent to the filing of this opinion as an exhibit to the current report on Form 8-K to be filed with the Commission on the date hereof for incorporation by reference into the Registration Statement and to the reference to this firm under the heading "Legal Matters" in the Prospectus Supplement filed September 24, 2013, pertaining to this transaction.

Very truly yours,

/s/ Porter, Wright, Morris & Arthur LLP

PORTER, WRIGHT, MORRIS & ARTHUR LLP

SECURITIES PURCHASE AGREEMENT

This **SECURITIES PURCHASE AGREEMENT** (the “**Agreement**”), dated as of September 24, 2013, is by and among Navidea Biopharmaceuticals, Inc., a Delaware corporation with offices located at 425 Metro Place North, Suite 450, Dublin, Ohio (the “**Company**”), and each of the investors listed on the Schedule of Buyers attached hereto (individually, a “**Buyer**” and collectively, the “**Buyers**”) (provided that if only one Buyer is listed on the Schedule of Buyers, then all references to “Buyers” hereunder shall be treated as if a reference to a single “Buyer” hereunder).

RECITALS

A. The Company and each Buyer desire to enter into this transaction for Buyer to purchase the Common Shares and Warrants (as defined below) set forth herein pursuant to a currently effective shelf registration statement on Form S-3, pursuant to which the Company may currently offer securities described therein for an aggregate initial offering price not to exceed \$90,115,594, including shares of common stock, \$0.001 par value per share, of the Company (the “**Common Stock**”) registered thereunder (Registration Number 333-173752) (the “**Registration Statement**”), which Registration Statement has been declared effective in accordance with the Securities Act of 1933, as amended (the “**1933 Act**”), by the United States Securities and Exchange Commission (the “**SEC**”).

B. Each Buyer wishes to purchase, and the Company wishes to sell, upon the terms stated in this Agreement, (i) the aggregate number of shares of Common Stock, set forth opposite such Buyer’s name in column (3) on the Schedule of Buyers (which aggregate amount for all Buyers shall be collectively referred to herein as the “**Common Shares**”) and (ii) warrants (the “**Warrants**”) to initially acquire up to the aggregate number of shares of Common Stock set forth opposite such Buyer’s name in column (4) on the Schedule of Buyers (all shares of Common Stock acquirable upon exercise or exchange of the Warrants, collectively, the “**Warrant Shares**”), as evidenced by the warrant certificate in the form attached hereto as **Exhibit A**, and which Warrants shall be issued to such Buyer for no additional consideration.

C. The Common Shares, the Warrants and the Warrant Shares are collectively referred to herein as the “**Securities**.”

D. The Company has obtained all necessary approvals, including without limitation, from the NYSE MKT (the “**Principal Market**”), with respect to the transactions contemplated by this Agreement and the issuance and sale of the Common Shares and the Warrant Shares, and more specifically, the Company has secured the listing of all of the Common Shares and Warrant Shares (subject to notice of issuance) upon the Principal Market.

E. The parties hereto each understand that this Securities Purchase Agreement and the purchase and sale contemplated hereby is unconditional and binding on all parties hereto.

AGREEMENT

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

1. PURCHASE AND SALE OF COMMON SHARES AND WARRANTS.

(a) Common Shares and Warrants. The Company shall issue and sell to each Buyer, and each Buyer severally, but not jointly, shall purchase from the Company on the Closing Date (as defined below), the aggregate number of Common Shares, as is set forth opposite such Buyer's name in column (3) on the Schedule of Buyers and (ii) Warrants, to initially acquire up to that number of Warrant Shares as is set forth opposite such Buyer's name in column (4) on the Schedule of Buyers.

(b) Closing. The closing and settlement (the "**Closing**") of the purchase of the Common Shares and Warrants by the Buyers shall occur at the offices of Greenberg Traurig, LLP, 77 W. Wacker Drive, Suite 3100, Chicago, Illinois 60601 on the date hereof and shall occur at 9:15 a.m., New York time (the "**Closing Date**"). As used herein "**Business Day**" means any day other than a Saturday, Sunday or other day on which commercial banks in New York, New York are authorized or required by law to remain closed.

(c) Purchase Price. The aggregate purchase price for the Common Shares and the Warrants to be purchased by each Buyer (the "**Purchase Price**") shall be the amount set forth opposite such Buyer's name in column (5) on the Schedule of Buyers. For clarification purposes, the Warrants shall be issued to such Buyer for no additional consideration.

(d) Form of Payment; Deliveries. On the Closing Date, (i) each Buyer shall pay its respective Purchase Price to the Company for the Common Shares and the Warrants to be issued and sold to such Buyer at the Closing, by wire transfer of immediately available funds in accordance with the Company's written wire instructions, and (ii) the Company shall (A) cause Continental Stock Transfer & Trust Company (together with any subsequent transfer agent, the "**Transfer Agent**") through the Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program to credit, without restriction, to such Buyer's or its designee's balance account with DTC through its Deposit/Withdrawal at Custodian ("**DWAC**") system such aggregate number of Common Shares that such Buyer is purchasing as is set forth opposite such Buyer's name in column (3) on the Schedule of Buyers, (B) deliver to each Buyer a warrant certificate, in the form attached hereto as **Exhibit A**, pursuant to which such Buyer shall have the right to initially acquire up to the number of Warrant Shares as is set forth opposite such Buyer's name in column (4) on the Schedule of Buyers and (C) deliver to such Buyer the other documents, instruments and certificates set forth in Section 6. Notwithstanding anything to the contrary contained in the Warrants, all Warrant Shares shall be delivered via DWAC.

2. BUYER'S REPRESENTATIONS AND WARRANTIES.

Each Buyer, severally and not jointly, represents and warrants to the Company with respect to only itself that:

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

(b) Authorization: Validity: Enforcement. The execution and delivery of this Agreement and the Transaction Documents to which such Buyer is a party and the consummation by it of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary action on the part of such Buyer and no further consent or authorization of such Buyer or its members is required. Each Transaction Document to which such Buyer is a party has been duly and validly executed and delivered by or on behalf of such Buyer and constitutes the legal, valid and binding obligations of such Buyer enforceable against such Buyer in accordance with its terms, except as such enforceability may be limited by general principles of equity or to applicable bankruptcy, insolvency, reorganization, moratorium, liquidation and other similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies.

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

(d) Certain Trading Activities. Such Buyer has not directly or indirectly, nor has any Person (as defined below) acting on behalf of or pursuant to any understanding with such Buyer, engaged in any transactions in the securities of the Company (including, without limitation, any Short Sales (as defined below) involving the Company's securities) during the period commencing as of the time that such Buyer and the Company or the Placement Agent (as defined below) first began discussions regarding the specific investment in the Company contemplated by this Agreement and ending immediately prior to the execution of this Agreement by such Buyer (it being understood and agreed that for all purposes of this Agreement, and, without implication that the contrary would otherwise be true, that neither transactions nor purchases nor sales shall include the location and/or reservation of borrowable shares of Common Stock). "**Short Sales**" means all "short sales" as defined in Rule 200 promulgated under Regulation SHO under the 1934 Act (as defined below).

(e) Investment Decision. Such Buyer has based its investment decision solely upon the information contained in the Transaction Documents, the SEC Documents, such information as may be filed by the Company as a "Free Writing Prospectus" under the 1933 Act, and such other information as may have been provided to it by the Company in response to its inquiries, and has not based its investment decision on any research report or other information regarding the Company. Each Buyer further acknowledges that (i) the purchase of the Securities involves a degree of risk and (ii) the offering contained in the Transaction Documents does not constitute a securities recommendation or other form of financial product advice.

3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.

The Company represents and warrants to each of the Buyers that, except as may be set forth in the Company's SEC Documents (provided the following representations and warranties shall not be qualified by reference to the SEC Documents except to the extent (and only to the extent) specifically set forth in such representations and warranties: Sections 3(a), 3(b), 3(c), 3(d), 3(e), 3(f), 3(g), 3(h), 3(i), 3(j), 3(l), 3(bb), 3(cc), 3(dd) and 3(ee), as of the date of this Agreement (unless such representation and warranty specified a different time):

(a) Organization and Qualification. Each of the Company and each of its Subsidiaries is an entity duly incorporated or organized and validly existing and in good standing under the laws of the jurisdiction in which it is incorporated or formed, and has the requisite power and authorization to own its properties and to carry on its business as now being conducted and as presently proposed to be conducted. Each of the Company and each of its Subsidiaries is duly qualified as a foreign entity to do business and is in good standing in every jurisdiction in which its ownership of property or the nature of the business conducted by it makes such qualification necessary, except to the extent that the failure to be so qualified or be in good standing would not have a Material Adverse Effect. As used in this Agreement, "**Material Adverse Effect**" means any material adverse effect on (i) the business, properties, assets, liabilities, operations (including results thereof), condition (financial or otherwise) or prospects of the Company or any Subsidiary, taken as a whole, (ii) the transactions contemplated hereby or in any of the other Transaction Documents or (iii) the authority or ability of the Company to perform any of its obligations under any of the Transaction Documents. "**Subsidiaries**" means any Person in which the Company, directly or indirectly, (I) owns any of the outstanding capital stock or holds any equity or similar interest of such Person or (II) controls or operates all or any part of the business, operations or administration of such Person, and each of the foregoing is individually referred to herein as a "**Subsidiary.**"

(b) Authorization; Enforcement; Validity. The Company has the requisite power and authority to enter into and perform its obligations under this Agreement and the other Transaction Documents and to issue the Securities in accordance with the terms hereof and thereof. The execution and delivery of this Agreement and the other Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Common Shares, the issuance of the Warrants and the reservation for issuance and issuance of the Warrant Shares issuable upon exercise of the Warrants) have been duly authorized by the Company's board of directors and (other than the filing with the SEC of the prospectus supplement required by the Registration Statement pursuant to Rule 424(b) under the 1933 Act (the "**Prospectus Supplement**") supplementing the base prospectus forming part of the Registration Statement (the "**Prospectus**") and any other filings as may be required by any state securities agencies, all of which shall be made prior to the Closing) no further filing, consent or authorization is required by the Company, its board of directors or its stockholders or other governing body. This Agreement has been, and the other Transaction Documents will be prior to the Closing, duly executed and delivered by the Company, and each constitutes the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with its respective terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies and except as rights to indemnification and to contribution may be limited by federal or state securities law. "**Transaction Documents**" means, collectively, this Agreement, the Warrants, the Irrevocable Transfer Agent Instructions (as defined below) and each of the other agreements and instruments entered into or delivered by any of the parties hereto in connection with the transactions contemplated hereby and thereby, as may be amended from time to time.

(c) Issuance of Securities; Registration Statement. The issuances of the Common Shares and the Warrants are duly authorized and, upon issuance in accordance with the terms of the Transaction Documents, the Common Shares and Warrants will be validly issued, fully paid and non-assessable and free from all preemptive or similar rights, taxes, liens, charges and other encumbrances with respect to the issue thereof. As of the Closing, the Company shall have reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable upon exercise of the Warrants (without taking into account any limitations on the exercise of the Warrants set forth therein). The issuance of the Warrant Shares is duly authorized, and upon exercise in accordance with the Warrants, the Warrant Shares, when issued, will be validly issued, fully paid and non-assessable and free from all preemptive or similar rights, taxes, liens, charges and other encumbrances with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock. The issuance by the Company of the Securities has been properly registered under the 1933 Act, the Securities are being issued pursuant to the Registration Statement and all of the Securities are freely transferable and freely tradable by each of the Buyers without restriction. The Registration Statement is effective and available for the issuance of the Securities thereunder and the Company has not received any notice that the SEC has issued or intends to issue a stop-order with respect to the Registration Statement or that the SEC otherwise has suspended or withdrawn the effectiveness of the Registration Statement, either temporarily or permanently, or intends or has threatened in writing to do so. The “Plan of Distribution” section under the Registration Statement permits the issuance and sale of the Securities hereunder and as contemplated by the other Transaction Documents. Upon receipt of the Securities, each of the Buyers will have good and marketable title to the Securities. The Registration Statement and any prospectus included therein, including the Prospectus and the Prospectus Supplement, comply and complied in all material respects with the requirements of the 1933 Act and the 1934 Act and the rules and regulations of the SEC promulgated thereunder and all other applicable laws and regulations. At the time the Registration Statement and any amendments thereto became effective, at the date of this Agreement and at each deemed effective date thereof pursuant to Rule 430B(f)(2) of the 1933 Act, the Registration Statement and any amendments thereto complied and will comply in all material respects with the requirements of the 1933 Act and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Prospectus and any amendments or supplements thereto (including, without limitation the Prospectus Supplement), at the time the Prospectus or any amendment or supplement thereto was issued and at the Closing Date, complied and will comply in all material respects with the requirements of the 1933 Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company meets all of the requirements for the use of Form S-3 under the 1933 Act for the offering and sale of the Securities contemplated by this Agreement and the other Transaction Documents, and the SEC has not notified the Company of any objection to the use of the form of the Registration Statement pursuant to Rule 401(g)(1) under the 1933 Act. The Registration Statement meets the requirements set forth in Rule 415(a)(1)(x) under the 1933 Act. At the earliest time after the filing of the Registration Statement that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the 1933 Act) relating to any of the Securities, the Company was not and is not an “Ineligible Issuer” (as defined in Rule 405 under the 1933 Act). The Company (i) has not distributed any offering material in connection with the offering and sale of any of the Securities and (ii) until no Buyer holds any of the Securities, shall not distribute any offering material in connection with the offering and sale of any of the Securities to, or by, any of the Buyers, in each case, other than the Registration Statement, the Prospectus or the Prospectus Supplement.

(d) 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 issuance of the Common Shares, the Warrants and Warrant Shares and the reservation for issuance of the Warrant Shares) will not (i) result in a violation of the Certificate of Incorporation (as defined below) (including, without limitation, any certificates of designation contained therein) or other organizational documents of the Company or any of its Subsidiaries, any capital stock of the Company, or Bylaws (as defined below), (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 or any of its Subsidiaries is a party, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including, without limitation, federal and state and foreign securities laws and regulations and the rules and regulations of the Principal Market) applicable to the Company or any of its Subsidiaries or by which any property or asset of the Company or any of its Subsidiaries is bound or affected except, in the case of clause (ii) above, to the extent such violations that could not reasonably be expected to have a Material Adverse Effect.

(e) Consents. The Company is not required to obtain any consent from, authorization or order of, or make any filing which has not already been obtained or made (including, without limitation as to the listing on the Principal Market of the Common Shares and the Warrant Shares upon issuance) or registration with (other than the filing with the SEC of the Prospectus Supplement and a Current Report on Form 8-K, and any other filings as may be required by any state securities agencies), any court, governmental agency or any regulatory or self-regulatory agency or any other Person in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents, in each case, in accordance with the terms hereof or thereof. All consents, authorizations, orders, filings and registrations which the Company is required to obtain at or prior to the Closing will have been obtained or effected on or prior to the Closing Date, and neither the Company nor any of its Subsidiaries are aware of any facts or circumstances which might prevent the Company from obtaining or effecting any of the registration, application or filings contemplated by the Transaction Documents. The Company is not in violation of the requirements of the Principal Market or foreign, federal, state or local securities laws, and has no knowledge of any facts or circumstances which could reasonably lead to such violation or delisting or suspension of the Common Stock in the foreseeable future. No statute, rule, regulation, executive order, decree, ruling or injunction has been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction that prohibits the consummation of any of any of the transactions contemplated by the Transaction Documents, and no actions, suits or proceedings are pending or threatened by any Person that seeks to enjoin, prohibit or otherwise adversely affect any of the transactions contemplated by the Transaction Documents.

(f) Acknowledgment Regarding Buyer's Purchase of Securities. The Company acknowledges and agrees that each Buyer is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby and that no Buyer is (i) an officer or director of the Company or any of its Subsidiaries, (ii) an "affiliate" (as defined in Rule 144 promulgated under the 1933 Act (or a successor rule thereto) (collectively, "**Rule 144**")) of the Company (an "**Affiliate**") or any of its Subsidiaries or (iii) to its knowledge, a "beneficial owner" of more than 10% of the shares of Common Stock (as defined for purposes of Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the "**1934 Act**")). The Company further acknowledges that no Buyer is acting as a financial advisor or fiduciary of the Company or any of its Subsidiaries (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby, and any advice given by a Buyer or any of its representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to such Buyer's purchase of the Securities. The Company further represents to each Buyer that the Company's decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives. The Company is not, and has never been, an issuer identified in, or subject to, Rule 144(i).

(g) Placement Agent's Fees. Except for JMP Securities LLC (the "**Placement Agent**"), neither the Company nor any of its Subsidiaries has engaged any placement agent or other agent in connection with the sale of the Securities. The Company shall be responsible for the payment of any placement agent's fees, financial advisory fees, or brokers' commissions (other than for Persons engaged by any Buyer or its investment advisor) relating to or arising out of the transactions contemplated hereby (including, without limitation, the fees of the Placement Agent).

(h) No Integrated Offering. None of the Company, its Subsidiaries or any of their 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 cause this offering of the Securities to require approval of stockholders of the Company under any applicable stockholder approval provisions, including, without limitation, under the rules and regulations of any exchange or automated quotation system on which any of the securities of the Company are listed or designated for quotation. None of the Company, its Subsidiaries, their Affiliates nor any Person acting on their behalf will take any action or steps that would cause the offering of any of the Securities to be integrated with other offerings. No registration of the offer, sale or transfer of any of the Securities is required, except for registration contemplated hereby pursuant to the Registration Statement.

(i) Dilutive Effect. The Company understands and acknowledges that the number of Warrant Shares may increase in certain circumstances specified in the Warrant. The Company further acknowledges that its obligation to issue the Warrant Shares upon exercise of the Warrants in accordance with this Agreement and the Warrants is absolute and unconditional, regardless of the dilutive effect that such issuance may have on the ownership interests of other stockholders of the Company.

(j) Application of Takeover Protections: Rights Agreement. The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, interested stockholder, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Certificate of Incorporation, Bylaws or other organizational documents or the laws of the jurisdiction of its incorporation or otherwise that can be waived by approval of the board of directors and which is or could become applicable to any Buyer as a result of the transactions contemplated by this Agreement, including, without limitation, the Company's issuance of the Securities and any Buyer's ownership of the Securities. The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable any stockholder rights plan or similar arrangement relating to accumulations of beneficial ownership of shares of Common Stock or a change in control of the Company or any of its Subsidiaries.

(k) SEC Documents; Financial Statements. During the two (2) years prior to the date hereof, the Company has timely filed all reports, schedules, forms, statements and other documents required to be filed by it with the SEC pursuant to the reporting requirements of the 1934 Act (all of the foregoing filed prior to the date hereof and all exhibits included therein and financial statements, notes and schedules thereto and documents incorporated by reference therein being hereinafter referred to as the "**SEC Documents**"). The Company has delivered to each Buyer (or such Buyer's representatives) true, correct and complete copies of each of the SEC Documents not available on the EDGAR system. As of their respective dates, the SEC Documents complied in all material respects with the requirements of the 1934 Act and the rules and regulations of the SEC promulgated thereunder applicable to the SEC Documents, and none of the SEC Documents, at the time they were filed with the SEC, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. As of their respective dates, the financial statements of the Company included in the SEC Documents complied in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto as in effect as of the time of filing. Such financial statements have been prepared in accordance with generally accepted accounting principles, consistently applied, during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto, or (ii) in the case of unaudited interim statements, to the extent they may exclude footnotes or may be condensed or summary statements) and fairly present in all material respects the financial position of the Company as of the dates thereof and the results of its operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal year-end audit adjustments which will not be material, either individually or in the aggregate). No other information provided by or on behalf of the Company to the Buyers which is not included in the SEC Documents contains any untrue statement of a material fact or omits to state any material fact necessary in order to make the statements therein not misleading, in the light of the circumstance under which they are or were made.

(1) Absence of Certain Changes. Since the date of the Company's most recent audited financial statements contained in a Form 10-K, except as disclosed in the SEC Documents filed subsequent thereto, there has been no material adverse change and no material adverse development in the business, assets, liabilities, properties, operations (including results thereof), condition (financial or otherwise) or prospects of the Company or any of its Subsidiaries taken as a whole. Since the date of the Company's most recent audited financial statements contained in a Form 10-K, except as disclosed in the SEC Documents filed subsequent thereto, neither the Company nor any of its Subsidiaries has (i) declared or paid any dividends, (ii) sold any assets, individually or in the aggregate, outside of the ordinary course of business or (iii) made any material capital expenditures, individually or in the aggregate, outside of the ordinary course of business. Neither the Company nor any of its Subsidiaries has taken any steps to seek protection pursuant to any law or statute relating to bankruptcy, insolvency, reorganization, receivership, liquidation or winding up, nor does the Company or any Subsidiary have any knowledge or reason to believe that any of their respective creditors intend to initiate involuntary bankruptcy proceedings or any actual knowledge of any fact which would reasonably lead a creditor to do so. The Company and its Subsidiaries, individually and on a consolidated basis, are not as of the date hereof, and after giving effect to the transactions contemplated hereby to occur at the Closing will not be, Insolvent (as defined below). For purposes of this Section 3(l), "**Insolvent**" means, (I) with respect to the Company and its Subsidiaries, on a consolidated basis, (i) the present fair saleable value of the Company's and its Subsidiaries' assets is less than the amount required to pay the Company's and its Subsidiaries' total Indebtedness (as defined below), (ii) the Company and its Subsidiaries are unable to pay their debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured or (iii) the Company and its Subsidiaries intend to incur or believe that they will incur debts that would be beyond their ability to pay as such debts mature; and (II) with respect to the Company and each Subsidiary, individually, (i) the present fair saleable value of the Company's or such Subsidiary's (as the case may be) assets is less than the amount required to pay its respective total Indebtedness, (ii) the Company or such Subsidiary (as the case may be) is unable to pay its respective debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured or (iii) the Company or such Subsidiary (as the case may be) intends to incur or believes that it will incur debts that would be beyond its respective ability to pay as such debts mature. Neither the Company nor any of its Subsidiaries has engaged in any business or in any transaction, and is not about to engage in any business or in any transaction, for which the Company's or such Subsidiary's remaining assets constitute unreasonably small capital.

(m) No Undisclosed Events, Liabilities, Developments or Circumstances. No event, liability, development or circumstance has occurred or exists, or is reasonably expected to exist or occur with respect to the Company, any of its Subsidiaries or their respective business, properties, liabilities, prospects, operations (including results thereof) or condition (financial or otherwise) that (i) would be required to be disclosed by the Company under applicable securities laws on a registration statement on Form S-1 filed with the SEC relating to an issuance and sale by the Company of its Common Stock and which has not been publicly announced, (ii) would reasonably be expected to have a material adverse effect on any Buyer's investment hereunder or (iii) would reasonably be expected to have a Material Adverse Effect.

(n) Conduct of Business; Regulatory Permits. Neither the Company nor any of its Subsidiaries is in violation of any term of or in default under its Certificate of Incorporation, any certificate of designation, preferences or rights of any other outstanding series of preferred stock of the Company or any of its Subsidiaries or Bylaws or their organizational charter, certificate of formation or certificate of incorporation or bylaws, respectively. Neither the Company nor any of its Subsidiaries is in violation of any judgment, decree or order or any statute, ordinance, rule or regulation applicable to the Company or any of its Subsidiaries, and neither the Company nor any of its Subsidiaries will conduct its business in violation of any of the foregoing, except in all cases for possible violations which could not, individually or in the aggregate, have a Material Adverse Effect. Without limiting the generality of the foregoing, the Company is not in violation of any of the rules, regulations or requirements of the Principal Market and has no knowledge of any facts or circumstances that could reasonably lead to delisting or suspension of the Common Stock by the Principal Market in the foreseeable future and the Company is in compliance with all requirements in order to maintain listing or quotation on the Principal Market (including reporting requirements under the 1934 Act). Since February 10, 2011, (i) the Common Stock has been listed or designated for quotation on the Principal Market, (ii) trading in the Common Stock has not been suspended by the SEC or the Principal Market and (iii) the Company has received no communication, written or oral, from the SEC or, except as disclosed in the SEC Documents, the Principal Market regarding or relating to the suspension or delisting of the Common Stock from the Principal Market. The Company and each of its Subsidiaries possess all certificates, authorizations and permits issued by the appropriate regulatory authorities necessary to conduct their respective businesses, except where the failure to possess such certificates, authorizations or permits would not have, individually or in the aggregate, a Material Adverse Effect, and neither the Company nor any such Subsidiary has received any written notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit.

(o) Foreign Corrupt Practices; Certain Other Unlawful Matters. Neither the Company nor any of its Subsidiaries nor, to the Company's knowledge, any director, officer, agent, employee or other Person acting on behalf of the Company or any of its Subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its Subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (or rules or regulations or interpretations thereunder); or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any foreign or domestic government official or employee or otherwise. The Company and its Subsidiaries are in compliance with, and have not previously violated, the USA Patriot Act of 2001 and all other applicable U.S. and non-U.S. anti-money laundering laws and regulations, including, without limitation, the laws, regulations and Executive Orders and sanctions programs administered by the U.S. Office of Foreign Assets Control, including, without limitation, (i) Executive Order 13224 of September 23, 2001 entitled, "Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten to Commit, or Support Terrorism" (66 Fed. Reg. 49079 (2001)); and (ii) any regulations contained in 31 CFR, Subtitle B, Chapter V.

(p) Sarbanes-Oxley Act. The Company and each Subsidiary is in material compliance with all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and all applicable rules and regulations promulgated by the SEC thereunder that are effective as of the date hereof.

(q) Transactions With Affiliates. Except as disclosed in the SEC Documents, none of the officers, directors or employees or Affiliates of the Company or any of its Subsidiaries is presently a party to any transaction with the Company or any of its Subsidiaries (other than for ordinary course services as employees, officers or directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any such officer, director or employee or, to the knowledge of the Company or any of its Subsidiaries, any corporation, partnership, trust or other Person in which any such officer, director or employee or Affiliate has a substantial interest or is an employee, officer, director, trustee or partner.

(r) Equity Capitalization. As of the date hereof, the authorized capital stock of the Company consists of (i) 200,000,000 shares of Common Stock, of which 122,307,659 are issued and outstanding and 33,964,784 shares are reserved for issuance pursuant to securities (other than the Warrants) exercisable or exchangeable for, or convertible into, shares of Common Stock and (ii) 5,000,000 shares of preferred stock, of which 8,462.9 shares of Series B Convertible Preferred Stock (“**Series B Stock**”) are issued and outstanding. There are 80,000 shares of Common Stock held in treasury. All of such outstanding shares are duly authorized and have been, or upon issuance will be, validly issued and are fully paid and non-assessable. Except for Platinum Montaur Life Sciences, LLC (“**Montaur**”), to the Company’s knowledge, except as set forth in the SEC Documents, no Person owns 10% or more of the Company’s issued and outstanding shares of Common Stock (calculated based on the assumption that all Convertible Securities (as defined in the Warrants), whether or not presently exercisable or convertible, have been fully exercised or converted (as the case may be) taking account of any limitations on exercise or conversion (including “blockers”) contained therein without conceding that such identified Person is a 10% stockholder for purposes of federal securities laws). Except as disclosed in the SEC Documents, (i) none of the Company’s or any Subsidiary’s capital stock is subject to preemptive rights or any other similar rights or any liens or encumbrances suffered or permitted by the Company or any Subsidiary; (ii) except pursuant to the 2002 Stock Incentive Plan of the Company disclosed in the SEC Documents (collectively, the “**Company Stock Plans**”) and except for Series BB warrants exercisable for 300,000 shares of Common Stock, Series EE warrants exercisable for 134,211 shares of Common Stock, Series FF warrants exercisable for 30,000 shares of Common Stock, Series GG warrants exercisable for 333,333 shares of Common Stock, Series HH warrants exercisable for 301,205 shares of Common Stock and Series II warrants exercisable for 275,000 shares of Common Stock and the potential conversion of Series B Stock into shares of Common Stock, there are no outstanding options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, or exercisable or exchangeable for, any capital stock of the Company or any of its Subsidiaries, or contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to issue additional capital stock of the Company or any of its Subsidiaries or options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, or exercisable or exchangeable for, any capital stock of the Company or any of its Subsidiaries; (iii) there are no outstanding debt securities, notes, credit agreements, credit facilities or other agreements, documents or instruments evidencing Indebtedness of the Company or any of its Subsidiaries or by which the Company or any of its Subsidiaries is or may become bound; (iv) there are no financing statements securing obligations in any amounts filed in connection with the Company or any of its Subsidiaries; (v) there are no agreements or arrangements under which the Company or any of its Subsidiaries is obligated to register the sale of any of their securities under the 1933 Act (except pursuant to this Agreement); (vi) there are no outstanding securities or instruments of the Company or any of its Subsidiaries which contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to redeem a security of the Company or any of its Subsidiaries; (vii) there are no securities or instruments containing anti-dilution or similar provisions that will be triggered by the issuance of the Securities; (viii) neither the Company nor any Subsidiary has any stock appreciation rights or “phantom stock” plans or agreements or any similar plan or agreement other than pursuant to the Company Stock Plans; and (ix) neither the Company nor any of its Subsidiaries have any liabilities or obligations required to be disclosed in the SEC Documents which are not so disclosed in the SEC Documents, other than those incurred in the ordinary course of the Company’s or its Subsidiaries’ respective businesses and which, individually or in the aggregate, do not or could not have a Material Adverse Effect. The SEC Documents contain true, correct and complete 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**”), and the terms of all securities convertible into, or exercisable or exchangeable for, shares of Common Stock and the material rights of the holders thereof in respect thereto.

(s) Indebtedness and Other Contracts. Except as disclosed in the SEC Documents, neither the Company nor any of its Subsidiaries (i) has any outstanding Indebtedness, (ii) is a party to any contract, agreement or instrument, the violation of which, or default under which, by the other party or parties to such contract, agreement or instrument could reasonably be expected to result in a Material Adverse Effect, (iii) is in violation of any term of, or in default under, any contract, agreement or instrument relating to any Indebtedness, except where such violations and defaults would not result, individually or in the aggregate, in a Material Adverse Effect, or (iv) is a party to any contract, agreement or instrument relating to any Indebtedness, the performance of which, in the judgment of the Company's officers, has or is expected to have a Material Adverse Effect. For purposes of this Agreement: (x) "**Indebtedness**" of any Person means, without duplication (A) all indebtedness for borrowed money, (B) all obligations issued, undertaken or assumed as the deferred purchase price of property or services (including, without limitation, "capital leases" in accordance with generally accepted accounting principles) (other than trade payables entered into in the ordinary course of business), (C) all reimbursement or payment obligations with respect to letters of credit, surety bonds and other similar instruments, (D) all obligations evidenced by notes, bonds, debentures or similar instruments, including obligations so evidenced incurred in connection with the acquisition of property, assets or businesses, (E) all indebtedness created or arising under any conditional sale or other title retention agreement, or incurred as financing, in either case with respect to any property or assets acquired with the proceeds of such indebtedness (even though the rights and remedies of the seller or bank under such agreement in the event of default are limited to repossession or sale of such property), (F) all monetary obligations under any leasing or similar arrangement which, in connection with generally accepted accounting principles, consistently applied for the periods covered thereby, is classified as a capital lease, (G) all indebtedness referred to in clauses (A) through (F) above secured by (or for which the holder of such Indebtedness has an existing right, contingent or otherwise, to be secured by) any mortgage, lien, pledge, charge, security interest or other encumbrance upon or in any property or assets (including accounts and contract rights) owned by any Person, even though the Person which owns such assets or property has not assumed or become liable for the payment of such indebtedness, and (H) all Contingent Obligations in respect of indebtedness or obligations of others of the kinds referred to in clauses (A) through (G) above; (y) "**Contingent Obligation**" means, as to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to any indebtedness, lease, dividend or other obligation of another Person if the primary purpose or intent of the Person incurring such liability, or the primary effect thereof, is to provide assurance to the obligee of such liability that such liability will be paid or discharged, or that any agreements relating thereto will be complied with, or that the holders of such liability will be protected (in whole or in part) against loss with respect thereto; and (z) "**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(t) 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 (including the Principal Market) or body pending or, to the knowledge of the Company, threatened against or affecting the Company or any of its Subsidiaries, the Common Stock or any of the Company's or its Subsidiaries' officers or directors which is outside of the ordinary course of business or individually or in the aggregate material to the Company or its Subsidiaries taken as a whole. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the SEC involving the Company, any of its Subsidiaries or any current or former director or officer of the Company or any of its Subsidiaries. The SEC has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company under the 1933 Act or the 1934 Act, including, without limitation, the Registration Statement.

(u) Insurance. The Company and each of its Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as management of the Company believes to be prudent and customary in the businesses in which the Company and its Subsidiaries are engaged. Neither the Company nor any such Subsidiary has been refused any insurance coverage sought or applied for, and neither the Company nor any such Subsidiary has any reason to believe that it will be unable 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 have a Material Adverse Effect.

(v) Employee Relations. Neither the Company nor any of its Subsidiaries is a party to any collective bargaining agreement or employs any member of a union. The Company believes that its and its Subsidiaries' relations with their respective employees are good. No executive officer (as defined in Rule 501(f) promulgated under the 1933 Act) or other key employee of the Company or any of its Subsidiaries has notified the Company or any such Subsidiary that such officer intends to leave the Company or any such Subsidiary or otherwise terminate such officer's employment with the Company or any such Subsidiary. No executive officer or other key employee of the Company or any of its Subsidiaries is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement, non-competition agreement, or any other contract or agreement or any restrictive covenant, and the continued employment of each such executive officer or other key employee (as the case may be) does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all federal, state, local and foreign laws and regulations respecting labor, employment and employment practices and benefits, terms and conditions of employment and wages and hours, except where failure to be in compliance would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(w) Title. The Company and its Subsidiaries have good and marketable title in fee simple to all real property, and have good and marketable title to all personal property, owned by them which is material to the business of the Company and its Subsidiaries, in each case, free and clear of all liens, encumbrances and defects except such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and any of its Subsidiaries. Any real property and facilities held under lease by the Company or any of its Subsidiaries are held by them under valid, subsisting and enforceable leases 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 or any of its Subsidiaries.

(x) Intellectual Property Rights. The Company and its Subsidiaries own or possess adequate rights or licenses to use all trademarks, trade names, service marks, service mark registrations, service names, patents, patent rights, copyrights, original works, inventions, licenses, approvals, governmental authorizations, trade secrets and other intellectual property rights and all applications and registrations therefor ("**Intellectual Property Rights**") necessary to conduct their respective businesses as now conducted and as presently proposed to be conducted. None of the Company's or its Subsidiaries' Intellectual Property Rights have expired, terminated or been abandoned, or are expected to expire, terminate or be abandoned, within three years from the date of this Agreement, except where such expiration, termination or abandonment would not have a Material Adverse Effect. The Company has no knowledge of any infringement by the Company or any of its Subsidiaries of Intellectual Property Rights of others. There is no claim, action or proceeding being made or brought, or to the knowledge of the Company or any of its Subsidiaries, being threatened, against the Company or any of its Subsidiaries regarding their Intellectual Property Rights. The Company is not aware of any facts or circumstances which might give rise to any of the foregoing infringements or claims, actions or proceedings. The Company and each of its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their Intellectual Property Rights.

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

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

(aa) Tax Status. Except as would not have a Material Adverse Effect, the Company and each of its Subsidiaries (i) has timely made or filed all foreign, federal and state income and all other tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has timely paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations, except those being contested in good faith and (iii) has set aside on its books provision reasonably adequate for the payment of all taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due in writing by the taxing authority of any jurisdiction, and the officers of the Company and its Subsidiaries know of no basis for any such claim. The Company is not operated in such a manner as to qualify as a passive foreign investment company, as defined in Section 1297 of the U.S. Internal Revenue Code of 1986, as amended.

(bb) Internal Accounting and Disclosure Controls. The Company and each of its Subsidiaries maintains internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the 1934 Act) that is effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, including that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset and liability accountability, (iii) access to assets or incurrence of liabilities is permitted only in accordance with management's general or specific authorization and (iv) the recorded accountability for assets and liabilities is compared with the existing assets and liabilities at reasonable intervals and appropriate action is taken with respect to any difference. The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the 1934 Act) that are effective in ensuring that information required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is recorded, processed, summarized and reported, within the time periods specified in the rules and forms of the SEC, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is accumulated and communicated to the Company's management, including its principal executive officer or officers and its principal financial officer or officers, as appropriate, to allow timely decisions regarding required disclosure. Neither the Company nor any of its Subsidiaries has received any written notice or correspondence from any accountant or other Person relating to any potential material weakness or significant deficiency in any part of the internal controls over financial reporting of the Company or any of its Subsidiaries.

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

(dd) Investment Company Status. The Company is not, and upon consummation of the sale of the Securities will not be, an "investment company," an Affiliate of an "investment company," a company controlled by an "investment company" or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company" as such terms are defined in the Investment Company Act of 1940, as amended.

(e e) Acknowledgement Regarding Buyers' Trading Activity. It is understood and acknowledged by the Company that following the public disclosure of the transactions contemplated by the Transaction Documents, in accordance with the terms thereof, except as set forth in Section 4(r)(ii) hereof, (i) none of the Buyers have been asked by the Company or any of its Subsidiaries to agree, nor has any Buyer agreed with the Company or any of its Subsidiaries, to desist from effecting any transactions in or with respect to (including, without limitation, purchasing or selling, long and/or short) any securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) any Buyer, and counterparties in "derivative" transactions to which any such Buyer is a party, directly or indirectly, presently may have a "short" position in the Common Stock which was established prior to such Buyer's knowledge of the transactions contemplated by the Transaction Documents; and (iii) each Buyer shall not be deemed to have any affiliation with or control over any arm's length counterparty in any "derivative" transaction. The Company further understands and acknowledges that following the public disclosure of the transactions contemplated by the Transaction Documents pursuant to the Press Release (as defined below) one or more Buyers may engage, to the extent not prohibited by Section 4(r)(ii) hereof, trading activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value and/or number of the Warrant Shares deliverable with respect to the Securities are being determined or that such Warrants may be measured for various provision related to exercisability and that trading activities, if any, can have the effect of reducing the price of the Common Stock and the applicability of certain rights of the Company under the Warrants and/or the value of the existing stockholders' equity interest in the Company both at and after the time the trading activities are being conducted. The Company acknowledges that such aforementioned trading activities, to the extent not prohibited by Section 4(r)(ii) hereof, do not constitute a breach of this Agreement or any other Transaction Document or any of the documents executed in connection herewith or therewith.

(ff) Manipulation of Price. Neither the Company nor any of its Subsidiaries has, and, to the knowledge of the Company, no Person acting on their behalf has, directly or indirectly, (i) taken any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company or any of its Subsidiaries to facilitate the sale or resale of any of the Securities, or (ii) sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the Securities (other than the Placement Agent).

(gg) U.S. Real Property Holding Corporation. Neither the Company nor any of its Subsidiaries is, or has ever been, and so long as any of the Securities are held by any of the Buyers, shall become, a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company and each Subsidiary shall so certify upon any Buyer's request.

(hh) Registration Eligibility. The Company is eligible to register the issuance and sale of the Securities to the Buyers using Form S-3 promulgated under the 1933 Act.

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

(jj) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries is subject to the Bank Holding Company Act of 1956, as amended (the "**BHCA**") or to regulation by the Board of Governors of the Federal Reserve System (the "**Federal Reserve**"). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent (25%) or more of the total equity of a bank or any equity that is subject to the BHCA or to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA or to regulation by the Federal Reserve.

(kk) Registration Rights. No holder of securities of the Company has rights to the registration of any securities of the Company because of the filing of the Registration Statement or the issuance of the Securities hereunder that could expose the Company to material liability or any Buyer to any liability or that could impair the Company's ability to consummate the issuance and sale of the Securities in the manner, and at the times, contemplated hereby, which rights have not been waived by the holder thereof as of the date hereof.

(ll) Public Utility Holding Act. None of the Company nor any of its Subsidiaries is a “holding company,” or an “Affiliate” of a “holding company,” as such terms are defined in the Public Utility Holding Act of 2005.

(mm) Federal Power Act. None of the Company nor any of its Subsidiaries is subject to regulation as a “public utility” under the Federal Power Act, as amended.

(n n) Disclosure. The Company confirms that neither it nor any other Person acting on its behalf has provided any of the Buyers or their agents or counsel with any information that constitutes or could reasonably be expected to constitute material, non-public information concerning the Company or any of its Subsidiaries, other than the existence of the transactions contemplated by this Agreement and the other Transaction Documents. The Company understands and confirms that each of the Buyers will rely on the foregoing representations in effecting transactions in securities of the Company. All disclosure provided to the Buyers regarding the Company and its Subsidiaries, their businesses and the transactions contemplated hereby, including the schedules to this Agreement, furnished by or on behalf of the Company or any of its Subsidiaries is true and correct in all material respects and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. Each material press release issued by the Company or any of its Subsidiaries during the twelve (12) months preceding the date of this Agreement did not at the time of release contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they are made, not misleading. No event or circumstance has occurred or information exists with respect to the Company or any of its Subsidiaries or its or their business, properties, liabilities, prospects, operations (including results thereof) or conditions (financial or otherwise), which, under applicable law, rule or regulation, requires public disclosure at or before the date hereof or announcement by the Company but which has not been so publicly disclosed. The Company acknowledges and agrees that no Buyer makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 2.

4. COVENANTS.

(a) Maintenance of Registration Statement For so long as any of the Warrants remain outstanding, the Company shall use its reasonable best efforts to maintain the effectiveness of the Registration Statement for the issuance thereunder of the Warrant Shares, provided that, if at any time while the Warrants are outstanding the Company shall be ineligible to utilize Form S-3 (or any successor form) for the purpose of issuance of the Warrant Shares, the Company shall promptly amend the Registration Statement on such other form as may be necessary to maintain the effectiveness of the Registration Statement for this purpose. If at any time following the date hereof the Registration Statement is not effective or is not otherwise available for the issuance of the Securities or any prospectus contained therein is not available for use, the Company shall immediately notify the holders of the Securities in writing that the Registration Statement is not then effective or a prospectus contained therein is not available for use and thereafter shall promptly notify such holders when the Registration Statement is effective again and available for the issuance of the Securities or such prospectus is again available for use.

(b) Prospectus Supplement and Blue Sky. Immediately prior to execution of this Agreement, the Company shall have delivered, and as soon as practicable after execution of this Agreement the Company shall file, the Prospectus Supplement with respect to the Securities as required under, and in conformity with, the 1933 Act, including Rule 424(b) thereunder. The Company shall have taken immediately upon execution of this Agreement such action, if any, as required in order to obtain an exemption for, or to, qualify the Securities for sale to the Buyers at the Closing pursuant to this Agreement under applicable securities or “Blue Sky” laws of the states of the United States (or to obtain an exemption from such qualification), and shall provide evidence of any such action so taken to the Buyers on or prior to the Closing Date. Without limiting any other obligation of the Company under this Agreement, the Company shall timely make all filings and reports relating to the offer and sale of the Securities required under all applicable securities laws (including, without limitation, all applicable federal securities laws and all applicable “Blue Sky” laws), and the Company shall comply with all applicable federal, state and local laws, statutes, rules, regulations and the like relating to the offering and sale of the Securities to the Buyers. The Company shall take all necessary action to ensure the compliance with all applicable securities laws (including without limitation “Blue Sky” laws) of the issuance of any Warrant Shares from time to time upon exercise of the Warrants.

(c) Reporting Status. Until the date on which no Warrants are outstanding (the “**Reporting Period**”), the Company shall timely file all reports required to be filed with the SEC pursuant to the 1934 Act (or obtain extensions in respect thereof and file within the applicable grace period), and the Company shall not terminate its status as an issuer required to file reports under the 1934 Act even if the 1934 Act or the rules and regulations thereunder would no longer require or otherwise permit such termination.

(d) Use of Proceeds. The Company shall use the net proceeds from the sale of the Securities hereunder solely for (1) continuing product development and sales and marketing, in each case, of the Company’s business and (2) general corporate purposes. Without limiting the foregoing, none of such proceeds shall be used, directly or indirectly, for: (i) the satisfaction of any debt of the Company or any of its Subsidiaries (other than (A) payment of trade payables incurred after the date hereof in the ordinary course of the Company’s business and consistent with prior practices and (B) repayment of existing Indebtedness to General Electric Capital Corporation and MidCap Financial SBIC, LP, and Montaur, which shall be permitted use of proceeds), (ii) the redemption of any securities of the Company or (iii) the settlement of any outstanding litigation.

(e) Financial Information. The Company agrees to send the following to each Buyer during the Reporting Period (i) unless the following are filed with the SEC through EDGAR and are available to the public through the EDGAR system, within one (1) Business Day after the filing thereof with the SEC, a copy of its Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q, any interim reports or any consolidated balance sheets, income statements, stockholders’ equity statements and/or cash flow statements for any period other than annual, any Current Reports on Form 8-K and any registration statements (other than on Form S-8) or amendments filed pursuant to the 1933 Act, (ii) on the same day as the release thereof, facsimile or email copies of all press releases issued by the Company or any of its Subsidiaries and (iii) copies of any notices and other information made available or given to the stockholders of the Company generally, contemporaneously with the making available or giving thereof to the stockholders.

(f) Listing. The Company has secured the listing of all of the Common Shares and Warrant Shares (subject to notice of issuance) on the Principal Market in connection with the transactions contemplated hereby and by the Warrants and shall secure the listing or designation for quotation (as the case may be) of all of the Common Shares and Warrant Shares upon each other national securities exchange and automated quotation system, if any, upon which the Common Stock is then listed or designated for quotation (as the case may be) (subject to official notice of issuance) (but in no event later than the Closing Date) and shall maintain such listing or designation for quotation (as the case may be) of all the shares of Common Stock from time to time issuable under the terms of the Transaction Documents on the Principal Market and such national securities exchange or automated quotation system. The Company shall maintain the Common Stock's listing or designation for quotation (as the case may be) on the Principal Market, The New York Stock Exchange, the Nasdaq Global Market, the Nasdaq Capital Market or the Nasdaq Global Select Market (each, an "**Eligible Market**"). Neither the Company nor any of its Subsidiaries shall take any action which could be reasonably expected to result in the delisting or suspension of the Common Stock on an Eligible Market. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 4(f).

(g) Fees. Prior to the date hereof, the Company has paid, for the benefit of Crede CG III, Ltd. ("**Crede**"), a non-refundable, non-accountable document preparation fee in the amount of \$50,000. The Company shall be responsible for the payment of any placement agent's fees, financial advisory fees, consultant fees, transfer agent fees, DTC fees or broker's commissions (other than for Persons engaged by any Buyer) relating to or arising out of the transactions contemplated hereby (including, without limitation, any fees payable to the Placement Agent, who is the Company's sole placement agent in connection with the transactions contemplated by this Agreement). The Company shall pay, and hold each Buyer harmless against, any liability, loss or expense (including, without limitation, out-of-pocket expenses) arising in connection with any claim relating to any such payment. Except as set forth above, or as may otherwise be set forth in this Agreement or the other Transaction Documents, each party to this Agreement shall bear its own expenses in connection with the sale of the Securities to the Buyers.

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

(i) Disclosure of Transactions and Other Material Information. The Company shall, on or before 9:30 a.m. (but in no event prior to 9:15 a.m.), New York time, on the date hereof, issue a press release (the “**Press Release**”) reasonably acceptable to the Buyers disclosing all the material terms of the transactions contemplated by the Transaction Documents. On or before 9:30 a.m. (but in no event prior to 9:15 a.m.), New York time, on the date hereof, the Company shall file a Current Report on Form 8-K describing all the material terms of the transactions contemplated by the Transaction Documents in the form required by the 1934 Act and attaching all the material Transaction Documents (including, without limitation, this Agreement (and all schedules to this Agreement) and the form of Warrants) (including all attachments, the “**8-K Filing**”). From and after the issuance of the Press Release, the Company shall have disclosed all material, non-public information (if any) delivered to any of the Buyers by the Company or any of its Subsidiaries, or any of their respective officers, directors, employees or agents in connection with the transactions contemplated by the Transaction Documents. The Company shall not, and the Company shall cause each of its Subsidiaries and each of its and their respective officers, directors, employees and agents, not to, provide any Buyer with any material, non-public information regarding the Company or any of its Subsidiaries from and after the issuance of the Press Release without the express prior written consent of such Buyer. In the event of a breach of any of the foregoing covenants by the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees and agents (as determined in the reasonable good faith judgment of such Buyer), in addition to any other remedy provided herein or in the Transaction Documents, such Buyer 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, any of its Subsidiaries, or any of its or their respective officers, directors, employees or agents. No Buyer shall have any liability to the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees, stockholders or agents, for any such disclosure. Subject to the foregoing, neither the Company, its Subsidiaries nor any Buyer shall issue any press releases or any other public statements with respect to the transactions contemplated hereby; provided, however, the Company shall be entitled, without the prior approval of any Buyer, to make any press release or other public disclosure with respect to such transactions (i) in substantial conformity with the 8-K Filing and contemporaneously therewith and (ii) as is required by applicable law and regulations (provided that in the case of clause (i) each Buyer shall be consulted by the Company in connection with any such press release or other public disclosure prior to its release). Without the prior written consent of the applicable Buyer, the Company shall not (and shall cause each of its Subsidiaries and Affiliates to not) disclose the name of such Buyer in any filing (other than in the Transaction Documents filed as exhibits to the 8-K Filing), announcement, release or otherwise. Notwithstanding anything contained in this Agreement to the contrary and without implication that the contrary would otherwise be true, the Company expressly acknowledges and agrees that no Buyer has had, and no Buyer shall have (unless expressly agreed to by a particular Buyer after the date hereof in a written definitive and binding agreement executed by the Company and such particular Buyer), any duty of confidentiality with respect to, or a duty not to trade on the basis of, any material, non-public information regarding the Company or any of its Subsidiaries.

(j) Additional Issuance of Securities. The Company agrees that for the period commencing on the date hereof and ending on the date immediately following the ninety (90) day anniversary of the date hereof (provided that such period shall be extended by the number of days during such period and any extension thereof contemplated by this proviso on which the Registration Statement is not effective or any prospectus contained therein is not available for use) (the “**Restricted Period**”), neither the Company nor any of its Subsidiaries shall directly or indirectly issue, offer, sell, grant any option or right to purchase, or otherwise dispose of (or announce any issuance, offer, sale, grant of any option or right to purchase or other disposition of) any Common Stock or any security or any debt or other instrument convertible or exchangeable or exercisable into Common Stock or which constitutes (or would constitute but for lack of a fixed exercise or conversion or similar price or if it were not solely cash settled) a “derivative security” (as defined under the rules and regulations under Section 16 of the 1934 Act) or otherwise an equity-linked or related security (including, without limitation, any “equity security” (as that term is defined under Rule 405 promulgated under the 1933 Act) or which does or would otherwise constitute any Option (as defined in the Warrants) or Convertible Securities (any such issuance, offer, sale, grant, disposition or announcement (whether occurring during the Restricted Period or at any time thereafter) is referred to as a “**Subsequent Placement**”). Notwithstanding the foregoing, the immediately preceding sentence in this Section 4(j) shall not apply in respect of the issuance of (A) shares of Common Stock or standard options to purchase Common Stock or other standard equity linked securities (e.g., stock appreciation rights) to directors, officers or employees of the Company in their capacity as such pursuant to an Approved Share Plan (as defined below), provided that the exercise price of any such options is not lowered, none of such options are amended to increase the number of shares issuable thereunder and none of the terms or conditions of any such options are otherwise materially changed in any manner that adversely affects any of the Buyers; (B) shares of Common Stock issued upon the conversion or exercise of Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Share Plan that are covered by clause (A) above) issued prior to the date hereof, provided that the conversion price of any such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Share Plan that are covered by clause (A) above) is not lowered, none of such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Share Plan that are covered by clause (A) above) are amended to increase the number of shares issuable thereunder and none of the terms or conditions of any such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Share Plan that are covered by clause (A) above) are otherwise materially changed in any manner that adversely affects any of the Buyers; (C) the Warrants; (D) the Warrant Shares; (E) issuances of Common Stock or Convertible Securities in connection with strategic partnership, licensing, acquisition of a product candidate or technology, or similar arrangements, in each case, that are not primarily for financing purposes; (F) a stock split or other subdivision or combination, or a stock dividend made to all holders of any Company equity on a pro rata basis; (G) issuances of Common Stock as a dividend on shares of preferred stock outstanding as of the date hereof; or (H) the issuance of Common Stock or Convertible Securities in a firm commitment underwritten public offering in which the Buyers are included as selling stockholders in the registration statement for such public offering (each of the foregoing in clauses (A) through (H), collectively the “**Excluded Securities**”). “**Approved Share Plan**” means any employee benefit plan which has been approved by the board of directors of the Company prior to or subsequent to the date hereof pursuant to which shares of Common Stock and standard options to purchase Common Stock may be issued to any employee, officer or director for services provided to the Company in their capacity as such.

(k) Reservation of Shares. So long as any of the Warrants remain outstanding, the Company shall take all action necessary to at all times have authorized, and reserved for the purpose of issuance, the maximum number of shares of Common Stock issuable upon exercise of all the Warrants (without regard to any limitations on the exercise of the Warrants set forth therein).

(1) Conduct of Business. The business of the Company and its Subsidiaries shall not be conducted in violation of any law, ordinance or regulation of any governmental entity in any jurisdiction to which the Company is subject, except where such violations would not result, either individually or in the aggregate, in a Material Adverse Effect.

(m) Variable Rate Transaction. During the Restricted Period, the Company and each Subsidiary shall be prohibited from effecting, or entering into an agreement to effect, any Subsequent Placement involving a Variable Rate Transaction. “**Variable Rate Transaction**” means a transaction in which the Company or any Subsidiary (i) issues or sells any Convertible Securities either (A) at a conversion, exercise or exchange rate or other price that is based upon and/or varies with the trading prices of, or quotations for, the shares of Common Stock at any time after the initial issuance of such Convertible Securities, 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 Convertible Securities 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 pursuant to a customary “weighted average” anti-dilution provision or (ii) enters into any agreement (including, without limitation, an equity line of credit) whereby the Company or any Subsidiary may sell securities at a future determined price (other than standard and customary “preemptive” or “participation” rights). Each Buyer shall be entitled to obtain injunctive relief against the Company and its Subsidiaries to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(n) [Intentionally Omitted].

(o) Passive Foreign Investment Company. The Company shall conduct its business in such a manner as will ensure that the Company will not be deemed to constitute a passive foreign investment company within the meaning of Section 1297 of the U.S. Internal Revenue Code of 1986, as amended.

(p) Corporate Existence. So long as any Buyer owns any Warrants, the Company shall not be party to any Fundamental Transaction (as defined in the Warrants) unless the Company is in compliance with the applicable provisions governing Fundamental Transactions set forth in the Warrants.

(q) [Intentionally Omitted].

(r) Certain Restrictions as to Buyer.

(i) For so long as the Buyer or any of its Affiliates holds any Securities, neither the Buyer nor any Affiliate will: (i) vote any shares of Common Stock beneficially owned by it, solicit any proxies, or seek to advise or influence any Person with respect to any voting securities of the Company; (ii) engage or participate in any actions, plans or proposals which relate to or would result in (a) acquiring additional securities of the Company, alone or together with any other Person, which would result in Buyer or its Affiliates beneficially owning (within the meaning of Section 13(d) under the 1934 Act) more than 9.9% of the Common Stock, (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving Company or any of its Subsidiaries, (c) a sale or transfer of a material amount of assets of the Company or any of its Subsidiaries, (d) any change in the present board of directors or management of the Company, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board, (e) any material change in the present capitalization or dividend policy of the Company, (f) any other material change in the Company's business or corporate structure, including but not limited to, if the Company is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by Section 13 of the Investment Company Act of 1940, (g) changes in the Company's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Company by any Person, (h) causing a class of securities of the Company to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association, (i) a class of equity securities of the Company becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act, or (j) any action, intention, plan or arrangement similar to any of those enumerated above; or (iii) request the Company or its directors, officers, employees, agents or representatives to amend or waive any provision of this paragraph. The restrictions contained in this Section 4(r) shall not limit Buyer's rights to enforce its rights or exercise its rights as to the Securities or under the Transaction Documents.

(ii) Provided that the Company is in compliance with its obligations under this Agreement and the other Transaction Documents, each Buyer covenants and agrees that during the period beginning on the date hereof and ending on the Trading Day immediately following the date on which the Warrants are no longer outstanding, neither Buyer nor any of its Affiliates nor any entity managed or controlled by each such Buyer will, directly or indirectly, or cause or assist any Person to (x) enter into or execute any "short sale" (as such term is defined in Rule 200 of Regulation SHO, or any successor regulation, promulgated by the SEC under the Exchange Act) of the Common Stock or (y) trade in derivative securities to the same effect; provided, however, that this Section 4(r)(ii) shall not restrict or limit Buyer or such Affiliate or entity from effectuating "short sale" transactions of a number of shares of Common Stock in anticipation of the exercise and/or exchange of the Warrant for an equivalent number of Warrant Shares (it being understood and agreed that effectuating "short sales" during a Trading Day of shares of Common Stock shall be deemed to be made in anticipation of the exercise and/or exchange of the Warrant for an equivalent number of Warrant Shares so long as exercises and/or exchanges for such aggregate number of Warrant Shares are made within one (1) Trading Day after such "short sale").

5. REGISTER; TRANSFER AGENT INSTRUCTIONS; LEGEND.

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

(b) Transfer Agent Instructions. The Company shall issue irrevocable instructions to the Transfer Agent in the form previously provided to the Company (the “**Irrevocable Transfer Agent Instructions**”) to issue certificates or credit shares to the applicable balance accounts at DTC, without restriction and registered in the name of each Buyer or its respective nominee(s), for the Common Shares and the Warrant Shares in such amounts as specified from time to time by each Buyer to the Company upon delivery of the Common Shares or the exercise of the Warrants (as the case may be). The Company represents and warrants that no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 5(b) will be given by the Company to the Transfer Agent with respect to the Securities, and that the Securities shall otherwise be freely transferable on the books and records of the Company. If a Buyer effects a sale, assignment or transfer of the Securities, the Company shall permit the transfer and shall promptly instruct the Transfer Agent to issue one or more certificates or credit shares to the applicable balance accounts at DTC in such name and in such denominations as specified by such Buyer to effect such sale, transfer or assignment. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to each Buyer. Accordingly, the Company acknowledges that the remedy at law for a breach of its obligations under this Section 5(b) will be inadequate and agrees, in the event of a breach or threatened breach by the Company of the provisions of this Section 5(b), that each Buyer shall be entitled, in addition to all other available remedies, to an order and/or injunction restraining any breach and requiring immediate issuance and transfer, without the necessity of showing economic loss and without any bond or other security being required.

(c) Certificates and any other instruments evidencing the Securities shall not bear any restrictive or other legend.

6. **ADDITIONAL CLOSING DELIVERIES OF THE COMPANY.**

At the Closing, in addition to its other deliveries required under this Agreement, the Company shall deliver the following:

(i) The opinion of Porter Wright Morris & Arthur LLP, the Company’s counsel, dated as of the Closing Date, in the form acceptable to the Buyers;

(ii) A copy of the Irrevocable Transfer Agent Instructions, in the form acceptable to the Buyers, and which have been delivered to and acknowledged in writing by the Transfer Agent;

(iii) A certificate evidencing the formation and good standing of the Company in the Company’s jurisdiction of formation issued by the Secretary of State (or comparable office) of such jurisdiction of formation as of a date within ten (10) days of the Closing Date;

(iv) A certified copy of the Certificate of Incorporation as of a date reasonably acceptable to Buyers;

(v) A certificate executed by the Secretary of the Company on behalf of the Company, and not in his or her personal capacity, and dated as of the Closing Date, as to (A) the resolutions consistent with Section 3(b) as adopted by the Company's board of directors and as necessary or appropriate with respect to the issuance of the Securities and the approval of this Agreement and the other Transaction Documents and the terms and conditions hereof and thereof and otherwise in order to give effect hereto and thereto, (B) the Certificate of Incorporation and (C) the Bylaws, each as in effect at the Closing;

(vi) A letter from the Transfer Agent certifying the number of shares of Common Stock outstanding on the Closing Date immediately prior to the Closing; and

(vii) Such other documents, instruments or certificates relating to the transactions contemplated by this Agreement as necessary or appropriate to accomplish the purposes or intents of the issuance of the Securities, and the consummation of the transactions contemplated by this Agreement and the other Transaction Documents.

7. DAMAGES IN CERTAIN CIRCUMSTANCE AND CERTAIN RELATED MATTERS.

In the event that the Company shall fail to consummate the Closing as called for by Section 1(b) hereof, for any reason (other than material breach by a Buyer hereunder), the Company shall indemnify and hold harmless such Buyer from any and all costs, expenses, damages, losses and otherwise, with respect to the failure of the Company to effectuate the Closing and the transactions contemplated hereby. Without limiting the foregoing, in such event, such Buyer shall have the right to terminate its obligations under this Agreement with respect to itself at any time on or after such failure by the Company, without liability of such Buyer to the Company or any other Person. No such failure or termination of obligations of Buyer shall affect any obligation of the Company under this Agreement to reimburse such Buyer for the expenses otherwise called for by this Agreement. Nothing contained in this Section shall be deemed to release any party from any liability for any breach by such party of the terms and provisions of this Agreement or the other Transaction Documents or to impair the right of any party to compel specific performance by any other party of its obligations under this Agreement or the other Transaction Documents.

8. MISCELLANEOUS.

(a) Governing Law; Jurisdiction; Jury Trial. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address for such notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall (i) limit or be deemed to limit in any way any right to serve process in any manner permitted by law or (ii) operate, or be deemed to operate, to preclude any Buyer from bringing suit or taking other legal action against the Company in any other jurisdiction to collect on the Company's obligations to such Buyer or to enforce a judgment or other court ruling in favor of such Buyer or (iii) limit, or be deemed to limit, any provision of the Warrants which is contrary to the above. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.

(b) Counterparts. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party. In the event that any signature is delivered by facsimile transmission or by an e-mail which contains a portable document format (.pdf) file of an executed signature page, such signature page shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such signature page were an original thereof.

(c) Headings; Gender; Certain Meanings. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement. Unless the context clearly indicates otherwise, each pronoun herein shall be deemed to include the masculine, feminine, neuter, singular and plural forms thereof. The terms “including,” “includes,” “include” and words of like import shall be construed broadly as if followed by the words “without limitation.” The terms “herein,” “hereunder,” “hereof” and words of like import refer to this entire Agreement instead of just the provision in which they are found. When used herein, the words “law,” “rule,” “regulation” and the like means all applicable laws, rules and regulations, domestic or foreign, state, provincial, local or self-regulatory, including without limitation as to all applicable laws, rules and regulations of or related to the United States, applicable states, the SEC, and the Principal Market.

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

(e) Entire Agreement; Amendments. This Agreement, the other Transaction Documents and the schedules and exhibits attached hereto and thereto and the instruments referenced herein and therein supersede all other prior oral or written agreements between the Buyers, the Company, their Affiliates and Persons acting on their behalf solely with respect to the matters contained herein and therein, and this Agreement, the other Transaction Documents, the schedules and exhibits attached hereto and thereto and the instruments referenced herein and therein contain the entire understanding of the parties solely with respect to the matters covered herein and therein; provided, however, nothing contained in this Agreement or any other Transaction Document shall (or shall be deemed to), (i) have any effect on any agreements any Buyer has entered into with the Company or any of its Subsidiaries prior to the date hereof with respect to any prior investment made by such Buyer in the Company or (ii) waive, alter, modify or amend in any respect any obligations of the Company or any of its Subsidiaries, or any rights of or benefits to any Buyer or any other Person, in any agreement entered into prior to the date hereof between or among the Company and/or any of its Subsidiaries and any Buyer and all such agreements shall continue in full force and effect. Except as specifically set forth herein or therein, neither the Company nor any Buyer makes any representation, warranty, covenant or undertaking with respect to such matters. For clarification purposes, the Recitals are part of this Agreement. No provision of this Agreement may be amended other than by an instrument in writing signed by the Company and each of the Buyers. No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any of the Transaction Documents unless the same consideration also is offered to all of the parties to the Transaction Documents, all holders of Common Shares or all holders of the Warrants (as the case may be). The Company has not, directly or indirectly, made any agreements with any Buyers relating to the terms or conditions of the transactions contemplated by the Transaction Documents except as set forth in the Transaction Documents. Without limiting the foregoing, the Company confirms that, except as set forth in this Agreement, no Buyer has made any commitment or promise or has any other obligation to provide any financing to the Company, any Subsidiary or otherwise. As a material inducement for each Buyer to enter into this Agreement, the Company expressly acknowledges and agrees that (i) no due diligence investigation conducted by a Buyer or its advisors, if any, or its representatives shall affect such Buyer's right to rely on, or modify or qualify any of, the Company's representations and warranties contained in this Agreement or any other Transaction Document, (ii) nothing contained in the Registration Statement, the Prospectus or the Prospectus Supplement shall affect such Buyer's right to rely on, or modify or qualify any of, the Company's representations and warranties contained in this Agreement or any other Transaction Document and (iii) unless a provision of this Agreement or any other Transaction Document is expressly preceded by "except as disclosed in the SEC Documents," nothing contained in any of the SEC Documents shall affect such Buyer's right to rely on, or modify or qualify any of, the Company's representations and warranties contained in this Agreement or any other Transaction Document.

(f) Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon receipt, when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); (iii) when sent, if sent by e-mail (provided that such sent e-mail is kept on file (whether electronically or otherwise) by the sending party and the sending party does not receive an automatically generated message from the recipient's e-mail server that such e-mail could not be delivered to such recipient); and (iv) one (1) Business Day after deposit with an overnight courier service with next day delivery specified, in each case, properly addressed to the party to receive the same. The addresses and facsimile numbers and email addresses for such communications shall be:

If to the Company:

Navidea Biopharmaceuticals, Inc.
425 Metro Place North Suite 450
Dublin, Ohio 43017
Telephone: (614) 822-2385
Facsimile: (614) 793-7522
Email: mpykett@navidea.com
Attention: Mark J. Pykett, CEO

With a copy (for informational purposes only) to:

Porter, Wright, Morris & Arthur LLP
41 S. High Street, Suite 2800
Columbus, Ohio 43215
Telephone: (614) 227-2136
Facsimile: (614) 227-2100
Email: wjkelly@porterwright.com
Attention: William J. Kelly, Esq.

If to the Transfer Agent:

Continental Stock Transfer & Trust Company
17 Battery Place, 8th Floor
New York, NY 10004
Telephone: (212) 509-4000
Facsimile: (212) 509-5150

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

with a copy (for informational purposes only) to:

Greenberg Traurig, LLP
77 W. Wacker Drive, Suite 3100
Chicago, Illinois 60601
Telephone: (312) 456-8400
Facsimile: (312) 456-8435
Email: liebermanp@gtlaw.com
mazure@gtlaw.com
Attention: Peter H. Lieberman, Esq.
Eric Mazur, Esq.

or to 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 five (5) days prior to the effectiveness of such change, provided that Greenberg Traurig, LLP shall only be provided copies of notices sent to Crede. 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 containing the time, date, recipient facsimile number and an image of the first page of such transmission or (C) provided by an overnight courier service shall be rebuttable evidence of personal service, receipt by facsimile or receipt from an overnight courier service in accordance with clause (i), (ii) or (iii) above, respectively. A copy of the e-mail transmission containing the time, date and recipient e-mail address shall be rebuttable evidence of receipt by e-mail in accordance with clause (iii) above.

(g) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns, including, as contemplated below, any assignee of any of the Securities. The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of each of the Buyers, including, without limitation, by way of a Fundamental Transaction (as defined in the Warrants) (unless the Company is in compliance with the applicable provisions governing Fundamental Transactions set forth in the Warrants). A Buyer may assign some or all of its rights hereunder in connection with any transfer of any of its Securities without the consent of the Company, in which event such assignee shall be deemed to be a Buyer hereunder with respect to such assigned rights.

(h) No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, other than the Indemnitees referred to in Section 8(k).

(i) Survival. The representations, warranties, agreements and covenants shall survive the Closing. Each Buyer shall be responsible only for its own representations, warranties, agreements and covenants hereunder.

(j) Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as any 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.

(k) Indemnification.

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

(ii) Promptly after receipt by an Indemnitee under this Section 8(k) of notice of the commencement of any action or proceeding (including any governmental action or proceeding) involving an Indemnified Liability, such Indemnitee shall, if a claim in respect thereof is to be made against the Company under this Section 8(k), deliver to the Company a written notice of the commencement thereof, and the Company shall have the right to participate in, and, to the extent the Company so desires, to assume control of the defense thereof with counsel of its choosing reasonably satisfactory to the Indemnitee; provided, however, that an Indemnitee shall have the right to retain its own counsel with the fees and expenses of such counsel to be paid by the Company if: (i) the Company has agreed in writing to pay such fees and expenses; (ii) the Company shall have failed promptly to assume the defense of such Indemnified Liability and to employ counsel reasonably satisfactory to such Indemnitee in any such Indemnified Liability; or (iii) the named parties to any such Indemnified Liability (including any impleaded parties) include both such Indemnitee and the Company, and such Indemnitee shall have been advised by counsel that a conflict of interest is likely to exist if the same counsel were to represent such Indemnitee and the Company (in which case, if such Indemnitee notifies the Company in writing that it elects to employ separate counsel at the expense of the Company, then the Company shall not have the right to assume the defense thereof and such counsel shall be at the expense of the Company), provided further, that in the case of clause (iii) above the Company shall not be responsible for the reasonable fees and expenses of more than one (1) separate legal counsel for such Indemnitee. The Indemnitee shall reasonably cooperate with the Company in connection with any negotiation or defense of any such action or Indemnified Liability by the Company and shall furnish to the Company all information reasonably available to the Indemnitee which relates to such action or Indemnified Liability. The Company shall keep the Indemnitee reasonably apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. The Company shall not be liable for any settlement of any action, claim or proceeding effected without its prior written consent, provided, however, that the Company shall not unreasonably withhold, delay or condition its consent. The Company shall not, without the prior written consent of the Indemnitee, consent to entry of any judgment or enter into any settlement or other compromise which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnitee of a release from all liability in respect to such Indemnified Liability or litigation, and such settlement shall not include any admission as to fault on the part of the Indemnitee. Following indemnification as provided for hereunder, the Company shall be subrogated to all rights of the Indemnitee with respect to all third parties, firms or corporations relating to the matter for which indemnification has been made. The failure to deliver written notice to the Company within a reasonable time of the commencement of any such action shall not relieve the Company of any liability to the Indemnitee under this Section 8(k), except to the extent that the Company is materially and adversely prejudiced in its ability to defend such action.

(iii) The indemnification required by this Section 8(k) shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or Indemnified Liabilities are incurred.

(iv) The indemnity agreement contained herein shall be in addition to (A) any cause of action or similar right of the Indemnitee against the Company or others, and (B) any liabilities the Company may be subject to pursuant to the law.

(1) 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. No specific representation or warranty shall limit the generality or applicability of a more general representation or warranty. Each and every reference to share prices, shares of Common Stock and any other numbers in this Agreement that relate to the Common Stock shall be automatically adjusted for stock splits, stock combinations and other similar transactions that occur with respect to the Common Stock after the date of this Agreement.

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

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

(o) Payment Set Aside; Currency. To the extent that the Company makes a payment or payments to any Buyer hereunder or pursuant to any of the other Transaction Documents or any of the Buyers enforce or exercise their rights hereunder or thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, foreign, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred. Unless otherwise expressly indicated, all dollar amounts referred to in this Agreement and the other Transaction Documents are in United States Dollars (“**U.S. Dollars**”), and all amounts owing under this Agreement and all other Transaction Documents shall be paid in U.S. Dollars. All amounts denominated in other currencies (if any) shall be converted in the U.S. Dollar equivalent amount in accordance with the Exchange Rate on the date of calculation. “**Exchange Rate**” means, in relation to any amount of currency to be converted into U.S. Dollars pursuant to this Agreement, the U.S. Dollar exchange rate as published in the Wall Street Journal on the relevant date of calculation.

[signature pages follow]

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

COMPANY:

NAVIDEA BIOPHARMACEUTICALS, INC.

/s/ Mark J. Pykett

By: Mark J. Pykett

Its: Chief Executive Officer

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

BUYER:

CREDE CG III, LTD.

/s/ Terren S. Peizer

By: Terren S. Peizer

Its: Managing Director

SCHEDULE OF BUYERS

(1)	(2)	(3)	(4)	(5)	(6)
Buyer	Address and Facsimile Number	Number of Common Shares	Number of Warrant Shares	Purchase Price	Legal Representative's Address and Facsimile Number
Crede CG III, Ltd.	11150 Santa Monica Boulevard, Suite 1500 Los Angeles, California 90025 Facsimile: (310) 444-5300	10,563,381	3,169,015	\$ 30,000,000	Greenberg Traurig, LLP 77 W. Wacker Drive, Suite 3100 Chicago, Illinois 60601 Attention: Peter H. Lieberman Eric Mazur Facsimile: (312) 456-8435

The Company represents and warrants to Crede that based upon the above and the number of outstanding shares of Common Stock as set forth in Section 3(r) hereof, upon execution of this Agreement, Crede will beneficially own (within the meaning of Section 13(d) of the 1934 Act and the rules and regulations thereunder) no more than 9.9% of the Company's Common Stock.

Exhibit A

FORM OF WARRANT

NAVIDIA BIOPHARMACEUTICALS, INC.

Warrant To Purchase Common Stock

Warrant No.: _____

Date of Issuance: September 24, 2013 (“**Issuance Date**”)

Navidea Biopharmaceuticals, Inc., a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Crede CG III, Ltd., the registered holder hereof or its permitted assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined below) then in effect, upon exercise of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the “**Warrant**”), at any time or times on or after the Issuance Date but not after 11:59 p.m., New York time, on the Expiration Date (as defined below), 3,169,015 (subject to adjustment as provided herein) fully paid and non-assessable shares of Common Stock (as defined below) (the “**Warrant Shares**”). Except as otherwise defined herein, capitalized terms in this Warrant shall have the meanings set forth in Section 17. This Warrant is one of the Warrants to Purchase Common Stock (the “**SPA Warrants**”) issued pursuant to that certain Securities Purchase Agreement, dated as of September 24, 2013, by and among the Company and the investor(s) thereunder (the “**Buyer**” or “**Buyers**” as applicable) referred to therein (the “**Securities Purchase Agreement**”).

1. EXERCISE OF WARRANT.

(a) Mechanics of Exercise. Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section 1(f)), this Warrant may be exercised by the Holder on any day on or after the Issuance Date in whole or in part, by delivery (whether via facsimile or otherwise) of a written notice, in the form attached hereto as **Exhibit A** (the “**Exercise Notice**”), of the Holder’s election to exercise this Warrant. Within one (1) Trading Day following an exercise of this Warrant as aforesaid, the Holder shall deliver payment to the Company of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which this Warrant was so exercised (in respect of such specific exercise, the “**Aggregate Exercise Price**”) in cash or via wire transfer of immediately available funds if the Holder did not notify the Company in such Exercise Notice that such exercise was made pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall not be required to deliver the original of this Warrant in order to effect an exercise hereunder. Execution and delivery of an Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant certificate and issuance of a new Warrant certificate evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exercise Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant certificate after delivery of the Warrant Shares in accordance with the terms hereof. On or before the first (1st) Trading Day following the date on which the Company has received an Exercise Notice, the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of such Exercise Notice, in the form attached hereto as **Exhibit C**, to the Holder and the Company’s transfer agent (the “**Transfer Agent**”). On or before the third (3rd) Trading Day following the date on which the Company has received such Exercise Notice, the Company shall (X) provided that the Transfer Agent is participating in The Depository Trust Company (“**DTC**”) Fast Automated Securities Transfer Program (which the Company shall cause the Transfer Agent to do at Holder’s request), upon the request of the Holder, credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through DWAC, or (Y) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and deliver to the Holder or, at the Holder’s instruction pursuant to the Exercise Notice, the Holder’s agent or designee, in each case, sent by reputable overnight courier to the address as specified in the applicable Exercise Notice, a certificate, registered in the Company’s share register in the name of the Holder or its designee (as indicated in the applicable Exercise Notice), for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. Upon delivery of an Exercise Notice, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder’s DTC account or the date of delivery of the certificates evidencing such Warrant Shares (as the case may be). If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then, at the request of the Holder and upon surrender hereof by the Holder at the principal office of the Company, the Company shall as soon as practicable after any exercise and at its own expense, issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 8(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional shares of Common Stock are to be issued upon the exercise of this Warrant, but rather the number of shares of Common Stock to be issued shall be rounded up to the nearest whole number. The Company shall pay any and all taxes and fees which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant.

(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means \$3.83, subject to adjustment as provided herein.

(c) Company's Failure to Timely Deliver Securities. If the Company shall fail, for any reason or for no reason, to issue to the Holder within the later of (i) three (3) Trading Days after receipt of the applicable Exercise Notice or Exchange Notice, as applicable, and (ii) two (2) Trading Days after the Company's receipt of the Aggregate Exercise Price or valid notice of a Cashless Exercise, as applicable (such later date, the "**Share Delivery Deadline**"), a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company's share register or to credit the Holder's balance account with DTC for such number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise of this Warrant (as the case may be), and if on or after such Share Delivery Deadline the Holder (or any other Person in respect, or on behalf, of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of all or any portion of the number of shares of Common Stock, or a sale of a number of shares of Common Stock equal to all or any portion of the number of shares of Common Stock, issuable upon such exercise or exchange that the Holder so anticipated receiving from the Company, then, in addition to all other remedies available to the Holder, the Company shall, within three (3) Business Days after the Holder's request and in the Holder's discretion, either (i) pay cash to the Holder in an amount equal to the Holder's total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (including, without limitation, by any other Person in respect, or on behalf, of the Holder) (the "**Buy-In Price**"), at which point the Company's obligation to so issue and deliver such certificate or credit the Holder's balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise or exchange hereunder (as the case may be) (and to issue such shares of Common Stock) shall terminate, or (ii) promptly honor its obligation to so issue and deliver to the Holder a certificate or certificates representing such shares of Common Stock or credit the Holder's balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise or exchange hereunder (as the case may be) and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock multiplied by (B) the lowest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date of the applicable Exercise Notice or Exchange Notice, as the case may be, and ending on the date of such issuance and payment under this clause (ii).

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary (other than Section 1(f) below), if at the time of an exercise hereof any Equity Conditions Failure shall then exist, then the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to make a cashless exercise (each a "**Cashless Exercise**") under this paragraph (d). A Cashless Exercise under this paragraph (d) may be made, at the election of the Holder from time to time and irrespective of any other election to make a Cashless Exercise, so that upon such exercise Holder shall receive the "Net Number" of shares of Common Stock determined according to the following formula:

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

For purposes of the foregoing formula:

A= the total number of shares with respect to which this Warrant is then being exercised.

B= as applicable: (i) the Closing Sale Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 1(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 1(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) the Bid Price of the Common Stock as of the time of the Holder's execution of the applicable Exercise Notice if such Exercise Notice is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter pursuant to Section 1(a) hereof or (iii) the Closing Sale Price of the Common Stock on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 1(a) hereof after the close of "regular trading hours" on such Trading Day.

C= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

Notwithstanding anything to the contrary contained herein, exercise of this Warrant on a cashless basis may also be made from time to time at the election of the Holder (and irrespective of any election to make a Cashless Exercise under this paragraph (d)), pursuant to the exchange provisions of Section 5 of this Warrant.

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof (including, without limitation, the Net Number), the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed, provided that following such issuance to Holder such dispute shall be resolved in accordance with Section 14.

(f) Limitations on Exercises and Exchanges.

(i) Notwithstanding anything to the contrary contained in this Warrant, this Warrant shall not be exercisable or exchangeable by the Holder hereof to the extent (but only to the extent) that the Holder or any of its affiliates would beneficially own in excess of 9.9% (the "**Maximum Percentage**") of the Common Stock. To the extent the above limitation applies, the determination of whether this Warrant shall be exercisable or exchangeable (vis-à-vis other convertible, exercisable or exchangeable securities owned by the Holder or any of its affiliates) and of which such securities shall be exercisable or exchangeable (as among all such securities owned by the Holder) shall, subject to such Maximum Percentage limitation, be determined on the basis of the first submission to the Company for conversion, exercise or exchange (as the case may be). No prior inability to exercise or exchange this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability or exchangeability. For the purposes of this paragraph, beneficial ownership and all determinations and calculations (including, without limitation, with respect to calculations of percentage ownership) shall be determined in accordance with Section 13(d) of the 1934 Act (as defined in the Securities Purchase Agreement) and the rules and regulations promulgated thereunder. The provisions of this paragraph shall be implemented in a manner otherwise than in strict conformity with the terms of this paragraph to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Maximum Percentage beneficial ownership limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such Maximum Percentage limitation. The limitations contained in this paragraph shall apply to a successor Holder of this Warrant. The holders of Common Stock shall be third party beneficiaries of this paragraph and the Company may not waive this paragraph without the consent of holders of a majority of its Common Stock. For any reason at any time, upon the written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding, including by virtue of any prior conversion or exercise or exchange of convertible or exercisable or exchangeable securities into Common Stock, including, without limitation, pursuant to this Warrant or securities issued pursuant to the Securities Purchase Agreement.

(ii) Principal Market Regulation. In order to comply with the rules and regulations of the Principal Market, the Company shall not issue any shares of Common Stock upon exercise or exchange of this Warrant if the issuance of such shares of Common Stock would, when added to the number of Common Shares (as defined in the Securities Purchase Agreement) issued pursuant to the Securities Purchase Agreement and the SPA Warrants, exceed 24,449,301 shares of Common Stock in the aggregate (the “**Exchange Cap**”), based upon the total issued and outstanding number of shares of common stock as of the preceding trading day of the Issuance Date, except that such limitation shall not apply in the event that the Company (A) obtains the approval of its stockholders as required by the applicable rules of the Principal Market for issuances of shares of Common Stock in excess of such amount, or (B) is no longer traded on the Principal Market. For so long as the Exchange Cap is applicable, no Buyer shall be issued in the aggregate, upon exercise or exchange of any SPA Warrants, shares of Common Stock in an amount greater than the product of (i) the Exchange Cap multiplied by (ii) the quotient of (1) the Purchase Price paid by such Buyer pursuant to the Securities Purchase Agreement divided by (2) the Purchase Price paid by all Buyers pursuant to the Securities Purchase Agreement (with respect to each Buyer, the “**Exchange Cap Allocation**”). In the event that any Buyer shall sell or otherwise transfer any of such Buyer’s SPA Warrants, the transferee shall be allocated a pro rata portion of such Buyer’s Exchange Cap Allocation with respect to such portion of such SPA Warrants so transferred, and the restrictions in this Section 1(f)(ii) shall apply to such transferee with respect to the portion of the Exchange Cap Allocation so allocated to such transferee. Upon exercise or exchange in full of a holder’s SPA Warrants, the difference (if any) between such holder’s Exchange Cap Allocation and the number of shares of Common Stock actually issued to such holder upon such holder’s exercise or exchange in full of such SPA Warrants shall be allocated to the respective Exchange Cap Allocations of the remaining holders of SPA Warrants on a pro rata basis in proportion to the shares of Common Stock underlying the SPA Warrants then held by each such holder.

(g) Insufficient Authorized Shares. The Company shall at all times keep reserved for issuance under this Warrant a number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock hereunder (without regard to any limitation otherwise contained herein with respect to the number of shares of Common Stock that may be acquirable upon exercise or exchange of this Warrant). If, notwithstanding the foregoing, and not in limitation thereof, at any time while any of the SPA Warrants remain outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance upon exercise or exchange of the SPA Warrants at least a number of shares of Common Stock equal to the number of shares of Common Stock as shall from time to time be necessary to effect the exercise or exchange of all of the SPA Warrants then outstanding (the "**Required Reserve Amount**") (an "**Authorized Share Failure**"), then the Company shall immediately take all action necessary to increase the Company's authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for all the SPA Warrants then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than ninety (90) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its reasonable efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock.

(h) Activity Restrictions.

(i) For so long as Holder or any of its Affiliates holds any Warrants or any Warrant Shares, neither Holder nor any Affiliate will: (i) vote any shares of Common Stock beneficially owned by it, solicit any proxies, or seek to advise or influence any Person with respect to any voting securities of the Company; (ii) engage or participate in any actions, plans or proposals which relate to or would result in (a) acquiring additional securities of the Company, alone or together with any other Person, which would result in Buyer or its Affiliates beneficially owning (within the meaning of Section 13(d) under the 1934 Act) more than 9.9% of the Common Stock, (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving Company or any of its Subsidiaries, (c) a sale or transfer of a material amount of assets of the Company or any of its Subsidiaries, (d) any change in the present board of directors or management of the Company, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board, (e) any material change in the present capitalization or dividend policy of the Company, (f) any other material change in the Company's business or corporate structure, including but not limited to, if the Company is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by Section 13 of the Investment Company Act of 1940, (g) changes in the Company's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Company by any Person, (h) causing a class of securities of the Company to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association, (i) a class of equity securities of the Company becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act, or (j) any action, intention, plan or arrangement similar to any of those enumerated above; or (iii) request the Company or its directors, officers, employees, agents or representatives to amend or waive any provision of this paragraph. The restrictions contained in this Section 1(h)(i) shall not limit Holder's rights to enforce its rights or exercise its rights as to the Securities or under this Warrant or the Transaction Documents.

(ii) Provided that no Equity Condition Failure shall have occurred, if the trading price on the Principal Market at the time of an exercise of this Warrant is greater than the then applicable Exercise Price then in effect, then in respect of such particular exercise Holder may only exercise this Warrant for a cash exercise price (and not by means of a Cashless Exercise under Section 1(d) above or on a cashless basis under Section 5 below).

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 2.

(a) Stock Dividends and Splits. Without limiting any provision of Section 4, if the Company, at any time on or after the date of the Securities Purchase Agreement, (i) pays a stock dividend on one or more classes of its then outstanding shares of Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its then outstanding shares of Common Stock into a larger number of shares or (iii) combines (by combination, reverse stock split or otherwise) one or more classes of its then outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination. If any event requiring an adjustment under this paragraph occurs during the period that an Exercise Price is calculated hereunder, then the calculation of such Exercise Price shall be adjusted appropriately to reflect such event.

(b) [Intentionally Omitted].

(c) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section 2, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment (without regard to any limitations on exercise contained herein). In addition, and notwithstanding anything to the contrary contained herein, upon an Exchange as set forth in Section 5 hereof, the number of Warrant Shares for which this Warrant is exercisable immediately following such Exchange shall be equal to (i) the number of Warrant Shares for which this Warrant was exercisable immediately prior to such Exchange less (ii) the number of Warrant Shares under the portion of the Warrant exchanged in Exchange (e.g., if this Warrant is exercisable (without regard to limitations hereunder) for 100 shares immediately prior to an Exchange and 30% of the Warrant is submitted for Exchange (i.e., the Warrant to acquire 30 Warrant Shares is submitted for Exchange), then this Warrant will be exercisable for 70 Warrant Shares immediately following the completion of such Exchange), and the number of such Warrant Shares issuable hereunder shall automatically be adjusted, as necessary, to enable to the Company to comply with its obligations to issue the full Exchange Number under Section 5 hereof upon any Exchange hereunder.

(d) Calculations. All calculations under this Section 2 shall be made by rounding to the nearest 1/10000th of cent and the nearest 1/100th of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issue or sale of Common Stock.

(e) Other Events. In the event that the Company (or any Subsidiary (as defined in the Securities Purchase Agreement)) shall take any action to which the provisions hereof are not strictly applicable, or, if applicable, would not operate to protect the Holder from dilution or if any event occurs of the type contemplated by the provisions of this Section 2 but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, phantom stock rights or other rights with equity features), then the Company's board of directors shall in good faith determine and implement an appropriate adjustment in the Exercise Price and the number of Warrant Shares (if applicable) so as to protect the rights of the Holder, provided that no such adjustment pursuant to this Section 2(e) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2, provided further that if the Holder does not accept such adjustments as appropriately protecting its interests hereunder against such dilution, then the Company's board of directors and the Holder shall agree, in good faith, upon an independent investment bank of nationally recognized standing to make such appropriate adjustments, whose determination shall be final and binding and whose fees and expenses shall be borne by the Company.

3. [Intentionally Omitted].

4. FUNDAMENTAL TRANSACTIONS. The Company shall not enter into or be party to a Fundamental Transaction unless the Successor Entity assumes in writing all of the obligations of the Company under this Warrant and the other Transaction Documents related to this Warrant in accordance with the provisions of this Section 4 pursuant to written agreements in form and substance satisfactory to the Holder and approved by the Holder prior to such Fundamental Transaction, including agreements confirming the obligations of the Successor Entity as set forth in this Section and elsewhere in this Warrant and an obligation to deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, which is exercisable for a corresponding number of shares of capital stock equivalent to the shares of Common Stock acquirable and receivable upon exercise or exchange of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such adjustments to the number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction). Notwithstanding the foregoing, at the election of the Holder upon exercise or exchange of this Warrant following a Fundamental Transaction, the Successor Entity shall deliver to the Holder, in lieu of the shares of Common Stock (or other securities, cash, assets or other property issuable upon the exercise of this Warrant prior to the applicable Fundamental Transaction, such shares of common stock (or its equivalent) of the Successor Entity (including its Parent Entity), or other securities, cash, assets or other property, which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had this Warrant been exercised or exchanged immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of this Warrant). The provisions of this Section 4 shall apply similarly and equally to successive Fundamental Transactions and shall be applied as if this Warrant (and any such subsequent warrants issued hereunder) were fully exercisable or exchangeable and without regard to any limitations on the exercise or exchange of this Warrant (provided that the Holder shall continue to be entitled to the benefit of the Maximum Percentage, applied however with respect to shares of capital stock registered under the 1934 Act and thereafter receivable upon exercise of this Warrant (or any such other warrant)).

5. **EXCHANGE RIGHTS.** In addition to the rights of the Holder under Section 1 hereof, this Warrant shall be exchangeable by the Holder on a cashless basis as further set forth below (and subject to the limitations set forth in Section 1(h)(ii) hereof).

(a) **Exchange Right.** The Holder shall be entitled at any time and from time to time from and after the six (6) month anniversary of the Issuance Date and prior to the Expiration Date, by written notice to the Company in the form of **Exhibit B** attached hereto (an **“Exchange Notice”**) to exchange (an **“Exchange”**) all or any portion of this Warrant for fully paid and non-assessable shares of Common Stock, all as further set forth in this Section 5.

(b) **Exchange Number.** The number of shares of Common Stock issuable in respect of such Exchange shall be determined by dividing (x) the Exchange Amount (as defined below) in respect of such Exchange by (y) the Exchange Price (as defined below) in respect of such Exchange (such number of shares of Common Stock so issuable being the **“Exchange Number”**).

(c) **Definitions.**

(i) **“Exchange Amount”** means the Black-Scholes Exchange Value of the portion of the Warrant being exchanged pursuant to Section 5(a), determined as of the applicable Exchange Date (as defined below).

(ii) **“Exchange Price”** means the Closing Bid Price as of two (2) Trading Days prior to the Exchange Date; provided that for purposes of calculating the Exchange Number, the Exchange Price shall be no less than Two Dollars (\$2.00).

(d) Mechanics of Exchange.

(i) Optional Exchange. To exchange any Exchange Amount on any date (an **‘Exchange Date’**), the Holder shall transmit by facsimile (or otherwise deliver), for receipt on such date, a copy of an executed Exchange Notice. The Holder shall not be required to deliver the original of this Warrant in order to effect an exchange hereunder. Execution and delivery of an Exchange Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exchange Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant after delivery of the Warrant Shares in accordance with the terms hereof.

(ii) Exchange for Shares of Common Stock. Within one (1) Trading Day following the date on which the Company has received an Exchange Notice, the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of such Exchange Notice, in the form attached hereto as **Exhibit C**, to the Holder and the Transfer Agent. On or before the third (3rd) Trading Day following the date on which the Company has received such Exchange Notice, the Exchange Number of shares of Common Stock shall be issued to Holder, or at Holder’s instruction, as if such shares of Common Stock were issuable upon an exercise under Section 1 hereof.

(iii) Disputes. Dispute as to the determination of the Exchange Amount, the Exchange Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof, and shares subject to such dispute, shall be handled in the same manner as for disputes under Section 1(e) hereof.

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

7. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in its capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in its capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which it is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 7, the Company shall provide the Holder with copies of the same notices and other information given to the stockholders of the Company generally, contemporaneously with the giving thereof to the stockholders; provided that the Company shall not be obligated to provide such information if it is filed with the SEC through EDGAR and available to the public through the EDGAR system.

8. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 8(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 8(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant (as to which a written certification and the indemnification contemplated below shall suffice as such evidence), and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary and reasonable form and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 8(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 8(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, no warrants for fractional shares of Common Stock shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 8(a) or Section 8(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

9. NOTICES. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in accordance with Section 9(f) of the Securities Purchase Agreement. The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant, including in reasonable detail a description of such action and the reason therefor. Without limiting the generality of the foregoing, the Company will give written notice to the Holder (i) as soon as practicable upon each adjustment of the Exercise Price and the number of Warrant Shares, setting forth in reasonable detail, and certifying, the calculation of such adjustment(s) and (ii) at least fifteen (15) days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, (B) with respect to any grants, issuances or sales of any Options, Convertible Securities or rights to purchase stock, warrants, securities, indebtedness, or other property pro rata to holders of shares of Common Stock or (C) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation, provided in each case that such information (to the extent it constitutes, or contains, material, non-public information regarding the Company or any of its Subsidiaries) shall be made known to the public prior to or in conjunction with such notice being provided to the Holder and (iii) at least ten (10) Trading Days prior to the consummation of any Fundamental Transaction. To the extent that any notice provided hereunder (whether under this Section 9 or otherwise) constitutes, or contains, material, non-public information regarding the Company or any of its Subsidiaries, the Company shall simultaneously file such notice with the SEC (as defined in the Securities Purchase Agreement) pursuant to a Current Report on Form 8-K. It is expressly understood and agreed that the time of execution specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

10. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant (other than Section 1(f) may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder. No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party.

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

12. **GOVERNING LAW.** This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. Each of the Holder and the Company hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude either the Holder or the Company from bringing suit or taking other legal action against the Holder or the Company in any other jurisdiction to enforce a judgment or other court ruling in favor of the Holder or the Company. **EACH OF THE HOLDER AND THE COMPANY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

13. **CONSTRUCTION; HEADINGS.** This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant. Terms used in this Warrant but defined in the other Transaction Documents shall have the meanings ascribed to such terms on the Closing Date (as defined in the Securities Purchase Agreement) in such other Transaction Documents unless otherwise consented to in writing by the Holder.

14. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value or the arithmetic calculation of the Warrant Shares (as the case may be), the Company or the Holder (as the case may be) shall submit the disputed determinations or arithmetic calculations (as the case may be) via facsimile (i) within two (2) Business Days after receipt of the applicable notice giving rise to such dispute to the Company or the Holder (as the case may be) or (ii) if no notice gave rise to such dispute, at any time after the Holder or the Company (as the case may be) learned of the circumstances giving rise to such dispute. If the Holder and the Company are unable to agree upon such determination or calculation (as the case may be) of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value or the number of Warrant Shares (as the case may be) within three (3) Business Days of such disputed determination or arithmetic calculation being submitted to the Company or the Holder (as the case may be), then the Company shall, within two (2) Business Days submit via facsimile (a) the disputed arithmetic calculation of the Warrant Shares, the disputed determination of the Exercise Price, the Exchange Amount, the Exchange Price, the Closing Sale Price, the Closing Bid Price, the Bid Price or fair market value (as the case may be) to an independent, reputable investment bank selected by the Holder and the Company or (b) if acceptable to the Holder, the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause at its expense the investment bank or the accountant (as the case may be) to perform the determinations or calculations (as the case may be) and notify the Company and the Holder of the results no later than ten (10) Business Days from the time it receives such disputed determinations or calculations (as the case may be). Such investment bank's or accountant's determination or calculation (as the case may be) shall be binding upon all parties absent demonstrable error.

15. REMEDIES, CHARACTERIZATION, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant and the other Transaction Documents, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual and consequential damages for any failure by the Company to comply with the terms of this Warrant. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, exercises and the like (and the computation thereof) shall be the amounts to be received by the Holder and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required. The Company shall provide all information and documentation to the Holder that is reasonably requested by the Holder to enable the Holder to confirm the Company's compliance with the terms and conditions of this Warrant (including, without limitation, compliance with Section 2 hereof). The issuance of shares and certificates for shares as contemplated hereby upon the exercise of this Warrant shall be made without charge to the Holder or such shares for any issuance tax or other costs in respect thereof, provided that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than the Holder or its agent on its behalf.

16. TRANSFER. This Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company. In order to validly exercise this Warrant, any Holder other than the original Holder of this Warrant must, concurrently with or prior to the delivery of an Exercise Notice to the Company, provide the Company with definitive documentation conclusively evidencing, in the Company's reasonable discretion, that the Person delivering such Exercise Notice is the actual owner of this Warrant possessing the right to cause the exercise hereof.

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

(a) **“Bid Price”** means, for any security as of the particular time of determination, the bid price for such security on the Principal Market as reported by Bloomberg as of such time of determination, or, if the Principal Market is not the principal securities exchange or trading market for such security, the bid price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg as of such time of determination, or if the foregoing does not apply, the bid price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg as of such time of determination, or, if no bid price is reported for such security by Bloomberg as of such time of determination, the average of the bid prices of all of the market makers for such security as reported in the “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC) (the **“Pink Sheets”**) as of such time of determination. If the Bid Price cannot be calculated for a security as of the particular time of determination on any of the foregoing bases, the Bid Price of such security as of such time of determination shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 14. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(b) **“Black Scholes Exchange Value”** means the value of an option for the number of shares equal to the portion of the Warrant being exchanged at the applicable Exchange Date as set forth in the applicable Exchange Notice as such value is determined calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the Closing Bid Price of the Common Stock as of the Trading Day immediately preceding the Issuance Date (adjusted upward to the same extent that the Exercise Price hereunder has been adjusted upward pursuant to Section 2(a) hereof), (ii) a risk-free interest rate corresponding to the five (5) year U.S. Treasury Note swap rate as of such Exchange Date, (iii) a strike price equal to the Exercise Price in effect at the time of the applicable Exchange, (iv) an expected volatility equal to 135% and (v) a deemed remaining term of the Warrant of five (5) years (regardless of the actual remaining term of the Warrant).

(c) **“Bloomberg”** means Bloomberg, L.P.

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

(e) **“Closing Bid Price”** and **“Closing Sale Price”** means, for any security as of any date, the last closing bid price and the last closing trade price, respectively, for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing bid price or the closing trade price (as the case may be) then the last bid price or last trade price, respectively, of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last closing bid price or last trade price, respectively, of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not apply, the last closing bid price or last trade price, respectively, of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no closing bid price or last trade price, respectively, is reported for such security by Bloomberg, the average of the bid prices, or the ask prices, respectively, of all of the market makers for such security as reported in the Pink Sheets. If the Closing Bid Price or the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Bid Price or the Closing Sale Price (as the case may be) of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 14. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(f) **“Common Stock”** means (i) the Company’s shares of common stock, \$0.001 par value per share, and (ii) any capital stock into which such common stock shall have been changed or any share capital resulting from a reclassification of such common stock.

(g) **“Convertible Securities”** means any stock or other security (other than Options) that is at any time and under any circumstances, directly or indirectly, convertible into, exercisable or exchangeable for, or which otherwise entitles the holder thereof to acquire, any shares of Common Stock.

(h) **“Eligible Market”** means the New York Stock Exchange, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or the Principal Market.

(i) **“Equity Conditions”** means: (i) the Company shall have complied in all material respects with all applicable securities laws and regulations and all rules and regulations of the applicable Eligible Market in respect of the offer, sale and issuance of the Securities under the Transaction Documents, (ii) the Common Stock (including all shares of Common Stock to be received by Holder) shall be listed or designated for quotation (as applicable) on an Eligible Market and no Trading Market Event (or event which with notice or passage of time would be a Trading Market Event) has occurred, nor shall delisting or suspension by an Eligible Market be pending or threatened and still pending, (iii) the Company shall be in compliance in all material respects with all of its obligations under all of the Transaction Documents, (iv) each of the Registration Statement and the Prospectus contained therein (each as defined in the Securities Purchase Agreement) shall continue to be effective and fully available for use with respect to issuance of all of the Securities, including, without limitation, any issuance of Warrant Shares pursuant to a cash exercise hereof, including without limitation a Mandatory Exercise under Section 18, (v) all Common Shares and Warrant Shares (including any Warrant Shares to be received upon exercise or exchange of this Warrant and including any Warrant Shares to be issued in a cash exercise) shall be then (or upon such issuance (as the case may be)) freely tradeable by Holder without restriction of any kind or nature (and the Company shall have no knowledge of any fact which would reasonably be expected to negate the foregoing in the foreseeable future), (vi) no limitation shall be applicable with respect to the issuance of any Warrant Shares hereunder (other than under Section 1(f)(i)), (vii) the Company is fully reporting under the 1934 Act and Rule 144 of the 1933 Act (as defined in the Securities Purchase Agreement) and has been such on a timely basis (without extension) for the 15 months immediately preceding the date of determination, and (viii) all Common Shares and all Warrant Shares shall have been properly and timely delivered under the Securities Purchase Agreement and this Warrant, including without limitation, all Warrant Shares issuable under Section 5 hereof and all Common Shares and Warrant Shares have been, and will be, delivered via DWAC. For purposes hereof a **“Trading Market Event”** shall mean if the Company or the Common Stock or any shares of Common Stock issued or issuable hereunder or under any other Transaction Document shall cease or fail to be listed for trading or quoted on an Eligible Market.

(j) “**Equity Conditions Failure**” means that on any applicable date of determination, any of the Equity Conditions have not been then satisfied.

(k) “**Expiration Date**” means the date that is the third (3rd) anniversary of the Issuance Date or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a “**Holiday**”), the next date that is not a Holiday.

(l) “**Fundamental Transaction**” means that (i) the Company shall, directly or indirectly, in one or more related transactions, (1) consolidate or merge with or into (whether or not the Company is the surviving corporation) any other Person unless the stockholders of the Company immediately prior to such consolidation or merger continue to hold more than 50% of the outstanding shares of Voting Stock after such consolidation or merger, or (2) sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of its properties or assets to any other Person, or (3) allow any other Person to make a purchase, tender or exchange offer that is accepted by the holders of more than 50% of the outstanding shares of Voting Stock of the Company (not including any shares of Voting Stock of the Company held by the Person or Persons making or party to, or associated or affiliated with the Persons making or party to, such purchase, tender or exchange offer), or (4) consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with any other Person whereby such other Person acquires more than 50% of the outstanding shares of Voting Stock of the Company (not including any shares of Voting Stock of the Company held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination), or (ii) any “person” or “group” (as these terms are used for purposes of Sections 13(d) and 14(d) of the 1934 Act and the rules and regulations promulgated thereunder) is or shall become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, of 50% of the aggregate ordinary voting power represented by issued and outstanding Voting Stock of the Company.

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

(n) “**Parent Entity**” of a Person means an entity that, directly or indirectly, controls the applicable Person and whose common stock or equivalent equity security is quoted or listed on an Eligible Market, or, if there is more than one such Person or Parent Entity, the Person or Parent Entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

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

(p) **“Principal Market”** means the NYSE MKT.

(q) **“Successor Entity”** means the Person (or, if so elected by the Holder, the Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or the Person (or, if so elected by the Holder, the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(r) **“Trading Day”** means, as applicable, (x) with respect to all price determinations relating to the Common Stock, any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded, provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time) unless such day is otherwise designated as a Trading Day in writing by the Holder or (y) with respect to all determinations other than price determinations relating to the Common Stock, any day on which The New York Stock Exchange (or any successor thereto) is open for trading of securities.

(s) **“Voting Stock”** of a Person means capital stock of such Person of the class or classes pursuant to which the holders thereof have the general voting power to elect, or the general power to appoint, at least a majority of the board of directors, managers or trustees of such Person (irrespective of whether or not at the time capital stock of any other class or classes shall have or might have voting power by reason of the happening of any contingency).

18. **MANDATORY EXERCISE.** If at any time after the six (6) month anniversary of the Issuance Date (the “**Mandatory Exercise Eligibility Date**”), (i) the Closing Bid Price of the Common Stock is equal to or greater than 125% of the Exercise Price then in effect (the “**Trigger Price**”) for at least twenty (20) Trading Days during any thirty (30) consecutive Trading Day Period that begins following the Mandatory Exercise Eligibility Date (the thirty (30) consecutive Trading Day period during which the condition in this clause (i) is satisfied is referred to herein as the “**Measuring Period**” and each Trading Day during the Measuring Period on which the Closing Bid Price of the Common Stock is equal to or greater than the Trigger Price is referred to herein as an “**Eligible Trading Day**”), (ii) no Equity Conditions Failure shall have occurred during the applicable Measuring Period, (iii) the aggregate dollar trading volume (as reported on Bloomberg) of the Common Stock on the applicable Eligible Market for each Eligible Trading Day during the applicable Measuring Period exceeds one million dollars (\$1,000,000) per day, then the Company shall have the right to require the Holder to exercise for cash all, but not less than all, of this Warrant for all of the then-remaining Warrant Shares as further set forth below. The Company may exercise its right to require exercise under this Section 18 (the “**Mandatory Exercise Right**”) on one occasion (or, if the Holder delivers to the Company a Blocker Notice (as defined below), such number of additional occasions as necessary to permit a Mandatory Exercise with respect to the entire amount of Warrant Shares issuable hereunder). The Company shall exercise its Mandatory Exercise Right (to the extent permitted hereby) by delivering, within ten (10) Trading Days following the end of the Measuring Period, a written notice thereof by facsimile and overnight courier to the Holder (the “**Mandatory Exercise Notice**” and the date such notice by facsimile is deemed to be delivered in accordance with Section 9(f) of the Securities Purchase Agreement is referred to as the “**Mandatory Exercise Notice Date**”). The Mandatory Exercise Notice shall be irrevocable. The Mandatory Exercise Notice shall (1) state the Trading Day selected for the Mandatory Exercise in accordance with this Section 18, which Trading Day shall be at least five (5) Trading Days but not more than fifteen (15) Trading Days following the Mandatory Exercise Notice Date (the “**Mandatory Exercise Date**”), (2) state the number of shares of Common Stock to be issued to the Holder on the Mandatory Exercise Date and (3) contain a certification from the Chief Executive Officer of the Company that there has been no Equity Conditions Failure as of the Mandatory Exercise Notice Date. Any portion of this Warrant exercised by the Holder after the Mandatory Exercise Notice Date shall reduce the number of Warrant Shares for which this Warrant is required to be exercised on the Mandatory Exercise Date. If the Company has elected a Mandatory Exercise, the mechanics of exercise set forth in Section 1 shall apply, to the extent applicable, as if the Company had received from the Holder on the Mandatory Exercise Date an Exercise Notice with respect to all of the then-remaining Warrant Shares (or the Permitted Exercise Amount (as defined below) of Warrant Shares, as applicable). Notwithstanding anything contained in this Section 18 to the contrary, if an Equity Conditions Failure occurs on any day during the period commencing on the Mandatory Exercise Notice Date and ending on the Mandatory Exercise Date, then the Mandatory Exercise Notice delivered to the Holder shall be null and void ab initio and the Mandatory Exercise shall not occur and the Mandatory Exercise Right shall not be available to the Company unless and until the conditions precedent to such Mandatory Exercise Right are again satisfied. If the Company elects to cause a mandatory exercise of this Warrant pursuant to this Section 18, then it must simultaneously take the same action with respect to all of the other SPA Warrants, if any, held by any person other than Holder. Notwithstanding anything contained in this Section 18 to the contrary, an effort by the Company to exercise its right under this Section 18 shall be stayed to the extent the Holder delivers a written notice to the Company stating that such exercise would result in a violation of Section 1(f) (a “**Blocker Notice**”), which Blocker Notice may be delivered at any time prior to the Mandatory Exercise Date, in which case the Company shall have the right to require the Holder to exercise this Warrant for such number of Warrant Shares that may be exercised hereunder without violating Section 1(f) (the “**Permitted Exercise Amount**”) and from time to time thereafter the Holder shall exercise this Warrant (so long as no Equity Conditions Failure has occurred from and after the Mandatory Exercise Notice Date) in such amounts and from time to time until fully exercised, subject to ongoing compliance with Section 1(f) hereof and subject to Holder’s rights hereunder and the other terms and conditions hereof following the Mandatory Exercise Date. For clarification, if an Equity Condition Failure shall occur, this Section 18 shall thereafter no longer be effective and Holder shall thereafter have no obligations under this Section 18.

[signature page follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

NAVIDEA BIOPHARMACEUTICALS, INC.

By: _____

Name:

Title:

EXERCISE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS
WARRANT TO PURCHASE COMMON STOCK

NAVIDEA BIOPHARMACEUTICALS, INC.

The undersigned holder hereby exercises the right to purchase _____ of the shares of Common Stock (“**Warrant Shares**”) of Navidea Biopharmaceuticals, Inc., a Delaware corporation (the “**Company**”), evidenced by Warrant to Purchase Common Stock No. _____ (the “**Warrant**”). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

_____ a “Cash Exercise” with respect to _____ Warrant Shares; and/or

_____ a “Cashless Exercise” with respect to _____ Warrant Shares.

In the event that the Holder has elected a Cashless Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the Holder hereby represents and warrants that (i) this Exercise Notice was executed by the Holder at _____ [a.m.][p.m.] on the date set forth below and (ii) if applicable, the Bid Price as of such time of execution of this Exercise Notice was \$ _____.

2 . Payment of Exercise Price. In the event that the Holder has elected a Cash Exercise with respect to some or all of the Warrant Shares, the Holder shall pay the Aggregate Exercise Price in the sum of \$ _____ to the Company in accordance with the terms of the Warrant.

3 . Delivery of Warrant Shares and Net Number of shares of Common Stock. The Company shall deliver to Holder, or its designee or agent as specified below, _____ shares of Common Stock in respect of the exercise contemplated hereby. Delivery shall be made to Holder, or for its benefit, to the following address:

Date: _____, _____

Name of Registered Holder

By: _____

Name:
Title:

Account Number: _____
(if electronic book entry transfer)

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

EXCHANGE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXCHANGE THIS
WARRANT TO PURCHASE COMMON STOCK

NAVIDEA BIOPHARMACEUTICALS, INC.

The undersigned holder hereby exercises the right to exchange the Warrant to Purchase Common Stock No. _____ (the "Warrant") of Navidea Biopharmaceuticals, Inc., a Delaware corporation (the "Company") as described. Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

Date of Exchange: _____

19. The total number of shares with respect to which this Warrant is being exchanged: _____

20. Black Scholes Exchange Value (as defined in Section 17) for an option to purchase _____ [SAME # AS FROM 1 ABOVE] shares of Common Stock: \$ _____.

Resulting Exchange Amount: \$ _____ [insert from item 2 above]

21. Exchange Price: Closing Bid Price of the Common Stock as of two (2) Trading Days prior to the date of Exchange (as such Closing Bid Price is defined in Section 17 herein); provided that for purposes of calculating the Exchange Number, the Exchange Price shall be no less than two dollars (\$2.00): \$ _____.

Resulting Exchange Number [Exchange Amount/Exchange Price as set forth in 3 above]: _____ shares of Common Stock

Account for Wire Transfer: _____

Account for Share issuance (if Company is permitted to elect and so elects): _____

Date: _____, _____

Name of Registered Holder

By: _____

Name:

Title:

ACKNOWLEDGMENT

The Company hereby acknowledges this [Exercise Notice][Exchange Notice] and hereby directs _____ to issue the above indicated number of shares of Common Stock in accordance with the Transfer Agent Instructions dated _____, 20__, from the Company and acknowledged and agreed to by _____.

NAVIDEA BIOPHARMACEUTICALS, INC.

By:

Name:

Title:

**CONFIDENTIAL**

September 19, 2013

Navidea Biopharmaceuticals, Inc
425 Metro Place North, Suite 300
Dublin, OH 43017

Attention: Mark Pykett, Chief Executive Officer

Re: Engagement with JMP Securities LLC

Dear Mark:

We are pleased to confirm the terms upon which JMP Securities LLC (“JMP”, “we” or “us”) is engaged by Navidea Biopharmaceuticals, Inc. (“you” or the “Company”) as the sole placement agent with respect to a purchase of \$30 million of common stock by Crede Capital Group, LLC (the “Transaction”). That “Transaction” constitutes a Transaction for the purpose of the agreement. This letter will confirm the understanding and agreement between JMP and the Company (the “Agreement”).

You are engaging us as the placement agent for a direct placement common stock and warrants of the Company (the “Securities”) in the Transaction. The proposed terms of the Transaction will depend on the outcome of our due diligence investigation and market conditions and the actual terms will be subject to negotiations between the Company, us and Crede Capital Group, LLC. The Company will be responsible for the preparation and contents of all legal documents to effectuate the Transaction. These materials will furnish all information required to be disclosed or furnished to investors under applicable securities laws and will not contain any untrue statement of material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading.

You may in your sole discretion postpone, modify or abandon a Transaction prior to closing. Either of us may decline to participate in a Transaction if we reasonably determine that the Transaction has become impractical or undesirable. Unless we have notified you in writing of our decision not to participate, you will not make any commitment with any other securities broker-dealer to participate in the Transaction during the term of this engagement without our prior written consent. We reserve the right to retain other broker-dealers to act as sub-agents on our behalf and to retain foreign representatives to act on our behalf for offers to non-United States persons (as defined under the Securities Act of 1933). We are an independent contractor to you and do not assume the responsibilities of a fiduciary to you or your shareholders in connection with the performance of our services.

This Agreement shall not give rise to any commitment by us to act as a principal in a Transaction and we will have no authority to bind you. With your consent, we may retain other advisors or consultants to act on our behalf in connection with a Transaction. An affiliate of JMP may elect to purchase Securities, but any such decision and relationship is entirely independent of our agreement hereunder.

JMP Securities LLC

600 Montgomery Street
Suite 1100
San Francisco, CA 94111

tel 415.835.8900
fax 415.835.8920
www.jmpsecurities.com

The term of our engagement will begin on the date hereof and continue for six (6) months or until earlier terminated by the final closing of a Transaction or our mutual written agreement. Our engagement may also be terminated by either party upon 30 days' prior written notice. Any early termination of our engagement by the Company will not affect your obligation to pay our fees or reimburse our expenses.

Except with respect to the Transaction contemplated by this Agreement, for a period commencing one week prior to the closing and ending ninety (90) days following the closing of the Transaction (the "Lock-Up Period"), the Company will not, and will cause each named executive officer (as identified in the Company's most recent Proxy Statement) and director of the Company to agree in writing with us that he or she will not, directly or indirectly, (1) offer for sale, sell, pledge or otherwise dispose of (or enter into any transaction or device which is designed to, or could be expected to, result in the disposition by any person at any time in the future of) any shares of Company common stock or any securities convertible into or exchangeable for Company common stock, or sell or grant options, rights or warrants with respect to any shares of Company common stock or securities convertible into or exchangeable for Company common stock (other than the grant of options pursuant to option plans existing on the date hereof), (2) enter into any swap or other derivatives transaction that transfers to another, in whole or in part, any of the economic benefits or risks of ownership of such shares of Company common stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or other securities, in cash or otherwise, in each case without the prior written consent of us. The foregoing restriction shall not apply to (i) securities required to be issued pursuant to contractual obligations of the Company in effect as of the date of this Agreement; or (ii) equity securities issued pursuant to employee benefit or purchase plans in effect as of the date of this letter agreement or pursuant to bona fide employee benefit or purchase plans established during the Lock-Up Period.

At the closing of a Transaction with Crede Capital Group LLC or one or more of its affiliates ("Crede") during the term of our engagement and one month thereafter, a fee of three and one-third percent (3.33%) of the gross proceeds of such Transaction will be due to us. At the closing of a Transaction with any investor(s) other than Crede during the term of our engagement and one month thereafter, a fee of six percent (6.0%) of the gross proceeds of such Transaction will be due to us. Our fee will be paid immediately upon closing and out of the proceeds of the Transaction and shall not be reduced by any obligation that the Company may have to any other broker or finder.

In addition to the fee payable to us under this Agreement, the Company agrees to reimburse us upon request for our out-of-pocket expenses incurred in connection with our services under this Agreement (with supporting invoices or receipts), including the reasonable fees and disbursements of our legal counsel. Without the written consent of the Company, such expenses, fees and disbursements shall not exceed \$100,000. You will reimburse us within thirty (30) days after receipt of an invoice from us. All expenses normally borne by the Company for transactions of this type will be paid by the Company.

We and the Company agree to the terms set forth in Exhibit A, which is incorporated by reference into this agreement and shall survive any termination or expiration of our engagement. If an agreement for a sale of the Company is entered into and the obligations of the Company in Exhibit A are not assumed, in a form and manner satisfactory to JMP, by operation of law or contract by the acquiring entity, the Company agrees to arrange alternative means of providing for such obligations prior to consummation of such transaction, including providing insurance or creating an escrow, in each case in an amount and upon terms and conditions satisfactory to JMP.

You agree that we have the right to publicize our involvement in a Transaction and place “tombstones” at our expense describing our services hereunder, but we agree not to use or disclose any confidential information concerning you for any purposes other than those contemplated in the agreement. If we request, you will include a mutually acceptable reference to us in the press release or other public announcement by you regarding a Transaction. The Company understands and agrees that, without JMP’s prior written consent, which shall not be unreasonably withheld, JMP may not be quoted or referred to in any document, release, or communication prepared, issued, or transmitted by the Company, including any entity controlled by, or under common control with, the Company and any director, officer, employee or agent thereof, unless the Company is required to disclose such information.

All notices or communications hereunder will be in writing and mailed or delivered to the parties at addresses set forth on the first page of this agreement and to the attention of the signatories to this agreement. The representations, warranties and covenants of the Company set forth herein will remain in full force and effect regardless of any investigation made by or on behalf of us, any potential investor in a Transaction or any other entity or persons and will survive the closing of the Transaction. The provisions of this agreement regarding fees, expenses and Exhibit A shall survive any termination or expiration of our engagement.

This agreement, including Exhibit A, shall be governed by and construed in accordance with the internal laws of the State of New York without giving effect to any principles of conflicts of law. Each of us and the Company (on its own behalf and, to the extent permitted by law, on behalf of its shareholders) waives any right to trial by jury in any action, claim, suit or proceeding and consents to personal jurisdiction and exclusive venue in the federal or state courts located in the city and county of New York, New York with respect to our engagement under or actions in connection with this agreement.

This agreement, together with Exhibit A hereto, contains the entire agreement between us concerning a Transaction and supersedes any prior understanding or agreement. Any amendment or waiver of any right or obligation must be in writing signed by the party against whom it is sought to be enforced. The rights and obligations you have or may have to us or any of our affiliates under any other agreement are separate from your rights and obligations under this agreement and will not be affected by our performance or failure to perform hereunder. The officer signing below is duly authorized to execute this agreement on behalf of the Company and upon execution; it shall be binding against the Company and in full force and effect.

This agreement may not be assigned by any party without the prior written consent of the parties. The benefits of this agreement and the attached indemnification shall inure to the respective successors and assigns of the parties to and persons indemnified under this agreement and their successors, assigns and representatives, and the obligations and liabilities assumed in this agreement and the attached indemnification shall be binding upon each party’s respective successors and assigns.

[Remainder of the page intentionally left blank.]

Navidea Biopharmaceuticals
September 10, 2013
Page 4 of 4

This agreement is effective as of the date first set forth above. Please confirm that the foregoing correctly and completely sets forth our understanding by signing and returning to us the enclosed duplicate of this agreement. We thank you for the opportunity to share in your business endeavors and are looking forward to a successful and mutually beneficial relationship.

Very truly yours,

JMP SECURITIES LLC

By: /s/ Kent Ledbetter

Kent Ledbetter

Director of Investment Banking

Accepted and agreed as of the date first written above:

NAVIDEA BIOPHARMACEUTICALS, INC.

By: /s/ Brent L. Larson

Brent L. Larson

Chief Financial Officer

EXHIBIT A

INDEMNIFICATION AGREEMENT

The signatory to the attached Engagement Agreement (“we,” “our,” “us” or the “Company”) hereby agrees to indemnify JMP Securities LLC (“JMP”), its affiliates, and each of their respective members, officers, directors, agents, employees and controlling persons (within the meaning of Section 20 of the Securities Exchange Act of 1934 and Section 15 of the Securities Act of 1933) (each of the foregoing, including JMP, an “Indemnified Person”) and to hold each Indemnified Person harmless from and against any and all losses, claims, damages, expenses (including reasonable fees, disbursements and other charges of counsel, all of which shall be payable quarterly as they are incurred), whether joint or several (all of the foregoing, “Liabilities”), to which any Indemnified Person may become liable or subject, directly or indirectly, based upon, relating to or arising out of the engagement agreement to which this Indemnification Agreement is attached (the “Engagement Agreement”) or any Indemnified Person’s role therein; provided, however, that we shall not be liable under this paragraph to the extent it is finally judicially determined by a court of competent jurisdiction that such Liabilities resulted primarily from the willful misconduct, gross negligence, or violation of applicable law of such Indemnified Person.

We also agree to reimburse each Indemnified Person promptly upon request for all expenses (including reasonable fees, disbursements and other charges of counsel) as they are incurred in connection with the investigation of, preparation for, defense of, or provision of evidence in, any action (including actions brought by us or our equity holders or derivative actions brought by any person claiming through us or in our name), claim, suit, arbitration, proceeding or investigation, whether formal or informal, directly or indirectly, relating to or arising out of, the Engagement Agreement or any Indemnified Person’s role therein, whether or not pending or threatened and whether or not any Indemnified Person is a party to such proceeding. Notwithstanding the foregoing, the relevant Indemnified Person shall repay such reimbursements to the extent they are attributable to Liabilities finally judicially determined by a court of competent jurisdiction to have resulted primarily from the willful misconduct, gross negligence or violation of applicable law of such Indemnified Person.

We further agree that no Indemnified Person shall have any liability (whether direct or indirect, in contract, tort or otherwise) to us or anyone claiming through us or in our name or right, directly or indirectly, in connection with (i) advice or services rendered or to be rendered by any Indemnified Person pursuant to the Engagement Agreement; (ii) the transactions contemplated by the Engagement Agreement or (iii) any Indemnified Person’s actions or inactions in connection with any such advice, services or transactions except to the extent that it is finally judicially determined by a court of competent jurisdiction that such Liabilities resulted primarily from the willful misconduct, gross negligence or violation of applicable law of the relevant Indemnified Person. In no event will any Indemnified Person be liable or obligated in any manner for any consequential, exemplary or punitive damages or lost profits arising out of the Engagement Agreement or any services provided thereunder and the Company agrees not to seek or claim any such damages or lost profits in any circumstances.

Promptly after JMP receives notice of the commencement of any action or other proceeding in respect of which indemnification or reimbursement may be sought hereunder, JMP will notify thereof; but the omission so to notify us shall not relieve us from any obligation hereunder unless, and only to the extent that, such omission results in our forfeiture of substantive rights or defenses. If any such action or other proceeding shall be brought against any Indemnified Person, we shall, upon written notice given reasonably promptly following your notice to us of such action or proceeding, be entitled to assume the defense thereof at our expense with counsel chosen by us and reasonably satisfactory to such Indemnified Person; provided, however, that any Indemnified Person may at its own expense retain separate counsel to participate in such defense. Notwithstanding the foregoing, such Indemnified Person shall have the right to employ separate counsel at our expense and to control its own defense of such action or proceeding if, in the reasonable opinion of counsel to such Indemnified Person, (i) there are or may be legal defenses available to such Indemnified Person or to other Indemnified Persons that are different from or additional to those available to us, or (ii) a conflict may arise between the positions of the Indemnified Person and us in conducting the defense of any such action that would make such separate representation advisable; provided, however, that in no event shall we be required to pay fees and expenses under this indemnity for more than one firm of attorneys (in addition to local counsel) in any jurisdiction in any one legal action or group of related legal actions.

If for any reason the foregoing indemnification and/or reimbursement is unavailable to any Indemnified Person or insufficient to hold it harmless, then we will contribute to the amount paid or payable by such Indemnified Person as a result of such Liabilities in such proportion as is appropriate to reflect the relative benefits to the Company on the one hand and JMP on the other hand in connection with the transaction to which such indemnification or reimbursement relates or if such allocation is not available, in such proportion as is appropriate to reflect not only the relative benefits, but also the relative fault of the parties as well as any other relevant equitable considerations, provided, however, that in no event shall the aggregate amount to be contributed by all Indemnified Persons exceed the fees actually received by JMP under the Engagement Agreement.

We will not, without the prior written consent of JMP, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding in respect of which indemnification could be sought hereunder (whether or not any Indemnified Person is a party thereto) unless such settlement, compromise or consent includes a full and unconditional release reasonably satisfactory to JMP of JMP and each other Indemnified Person from all liability arising or that may arise out of such claim, action or proceeding and the parties agree that the terms of such settlement, compromise and consent shall remain confidential.

The rights accorded to Indemnified Persons hereunder shall be in addition to any rights that any Indemnified Person may have at common law, by separate agreement or otherwise. If any provision hereof shall be determined to be invalid or unenforceable in any respect, such determination shall not affect such provision in any other respect or any other provision of this agreement, which shall remain in full force and effect. Each Indemnified Person is an intended beneficiary hereunder. The foregoing Indemnification Agreement shall remain in effect indefinitely notwithstanding any expiration or termination of the Engagement Agreement.



Press Release

FOR IMMEDIATE RELEASE

Navidea Biopharmaceuticals Completes \$30 Million Registered Direct Offering of Common Stock

DUBLIN OHIO, September 24, 2013 -- Navidea Biopharmaceuticals, Inc. (NYSE MKT: NAVB), a biopharmaceutical company focused on precision diagnostic radiopharmaceuticals, today announced that it has completed the sale of common stock and warrants (the "Units") for gross proceeds of \$30 million under a registered direct public offering with Crede CG III, Ltd. ("Crede"), a wholly-owned subsidiary of Crede Capital Group, LLC, a U.S.-based accredited, institutional investor.

The price paid by Crede is \$2.84 per Unit, which is equal to the closing bid price of Navidea common stock on Monday, September 23, 2013. Each Unit consists of one share of NAVB common stock, and a warrant to purchase three tenths (0.3) of a share of NAVB common stock at an exercise price of \$3.83, representing a 35% premium above the closing bid price of Navidea common stock on Monday, September 23, 2013. Under the Offering, Navidea has issued to Crede 10,563,381 shares of Navidea common stock and warrants to purchase up to an aggregate of 3,169,015 shares of NAVB common stock. The warrants have a three-year term.

Net proceeds realized by Navidea in connection with the offering are expected to be \$28.8 million after deducting the placement agent fees and estimated offering expenses. The Company expects to use the net proceeds to support the additional growth of the Company including pursuit of commercial opportunities for Lymphoseek[®] outside the U.S., the continued development of its neurodegenerative imaging portfolio, further evaluation of Manocept[™] platform initiatives, and other general corporate purposes.

Dr. Mark Pykett, CEO of Navidea, stated, "Navidea has been actively cultivating relationships with the institutional investment community and our efforts have generated ongoing interest in Navidea. We are pleased with this significant investment by Crede Capital Group, a quality family-office institutional investor with strong knowledge of the biotechnology industry and the international marketplace."

JMP Securities served as placement agent for this transaction.

About Navidea Biopharmaceuticals Inc.

Navidea Biopharmaceuticals, Inc. (NYSE MKT: NAVB) is a biopharmaceutical company focused on the development and commercialization of precision diagnostics and radiopharmaceutical agents. Navidea is actively developing four radiopharmaceutical agent platforms – Lymphoseek[®] (technetium 99m tilmanocept) Injection, NAV4694, NAV5001 and RIGScan[™] – to help identify the sites and pathways of undetected disease and enable better diagnostic accuracy, clinical decision-making and, ultimately, patient care. Navidea's first commercial agent, Lymphoseek, was approved by the FDA in March 2013. Navidea's strategy is to deliver superior growth and shareholder return by bringing to market novel radiopharmaceutical agents and advancing the Company's pipeline through selective acquisitions, global partnering and commercialization efforts. For more information, please visit www.navidea.com.

The Private Securities Litigation Reform Act of 1995 (the Act) provides a safe harbor for forward-looking statements made by or on behalf of the Company. Statements in this news release, which relate to other than strictly historical facts, such as statements about the Company's use of proceeds of the Offering and plans and strategies, expectations for future financial performance, new and existing products and technologies, anticipated clinical and regulatory pathways, and markets for the Company's products are forward-looking statements within the meaning of the Act. The words "believe," "expect," "anticipate," "estimate," "project," and similar expressions identify forward-looking statements that speak only as of the date hereof. Investors are cautioned that such statements involve risks and uncertainties that could cause actual results to differ materially from historical or anticipated results due to many factors including, but not limited to, the Company's continuing operating losses, uncertainty of market acceptance of its products, reliance on third party manufacturers, accumulated deficit, future capital needs, uncertainty of capital funding, dependence on limited product line and distribution channels, competition, limited marketing and manufacturing experience, risks of development of new products, regulatory risks and other risks detailed in the Company's most recent Annual Report on Form 10-K and other Securities and Exchange Commission filings. The Company undertakes no obligation to publicly update or revise any forward-looking statements.

Contact:

Source: Navidea Biopharmaceuticals, Inc.

Navidea Biopharmaceuticals

Brent Larson, 614-822-2330

Executive VP & CFO

Stern Investor Relations, Inc.

Beth DelGiacco, 212-362-1200

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