

**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) January 1, 2013

**SPHERIX® INCORPORATED**

(Exact name of registrant as specified in its charter)

(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)
Delaware	0-5576	52-0849320
(Address of principal executive offices)		(Zip Code)
6430 Rockledge Drive, Suite 503, Bethesda, Maryland		20817
Registrant's telephone number, including area code	<u>301-897-2540</u>	

(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**

Please refer to the disclosure provided under Item 3.03 of this Current Report on Form 8-K.

**Item 3.03      Material Modification to Rights of Security Holders**

Effective January 1, 2013, the Board of Directors of Spherix Incorporated (the "Company") authorized the issuance of one preferred share purchase right (a "Right") for each outstanding share of common stock, par value \$0.0001 per share (the "Common Shares"), of the Company. The distribution is payable to stockholders of record at the close of business on January 1, 2013 (the "Record Date"), and with respect to all Common Shares that become outstanding after the Record Date and prior to the earliest of the Distribution Date (as defined

below), the redemption of the Rights, the exchange of the Rights, and the expiration of the Rights (and, in certain cases, following the Distribution Date).

The Board adopted the Rights Agreement (as herein defined) to protect stockholders from coercive or otherwise unfair takeover tactics. In general terms, it works by imposing a significant penalty under any person or group that acquires 10% or more of the Common Shares without the approval of the Board. As a result, the overall effect of the Rights Agreement and the issuance of the Rights may be to render more difficult or discourage a merger, tender or exchange offer or other business combination involving the Company that is not approved by the Board. However, neither the Rights Agreement nor the Rights should interfere with any merger, tender or exchange offer or other business combination approved by the Board.

Each Right entitles the registered holder to purchase from the Company one one-hundredth of a share of Series A Participating Preferred Stock, no par value per share, of the Company (the "Preferred Shares") at a price of \$7.46 per one one-hundredth of a Preferred Share (the "Purchase Price"), subject to adjustment. The description and terms of the Rights are set forth in a Rights Agreement (the "Rights Agreement") between the Company and Equity Stock Transfer, LLC as Rights Agent (the "Rights Agent").

The Rights have certain anti-takeover effects. The Rights may cause substantial dilution to a person or group that attempts to acquire the Company on terms not approved by the Board of Directors, except pursuant to an offer conditioned on a substantial number of Rights being acquired. The Rights should not interfere with any merger or other business combination approved by the Board of Directors because of the Board of Directors ability to redeem the Rights, as discussed below.

#### RIGHTS ATTACH TO COMMON SHARES INITIALLY

Initially and until a Distribution Date (as defined below) occurs, the Rights are attached to all Common Shares and no separate Rights certificates will be issued. During this initial period:

- The Rights are not exercisable;
- Holders, as such, have no voting rights;
- The Rights are transferred with the Common Shares and are not transferable separately from the Common Shares;
- No dividends are paid on the Rights;
- New Common Share certificates or book entry shares issued will contain a notation incorporating the Rights Agreement by reference;
- The transfer of any Common Shares will also constitute the transfer of the Rights.

The Rights expire December 31, 2017 (the "Expiration Date") unless earlier redeemed or exchange by the Company as described below.

#### DISTRIBUTION OF RIGHTS

Separate certificates evidencing the Rights will be mailed to holders of record of the Common Shares on the "Distribution Date." The Distribution Date is the earlier to occur of the following two events:

- The tenth (10<sup>th</sup>) day after a public announcement that a person or group of affiliated or associated persons has acquired or obtained the right to acquire 10% or more of the outstanding Common Shares; or
- The tenth (10<sup>th</sup>) business day after the commencement or public disclosure of an intention to commence a tender offer or exchange offer by a person if, upon consummation of the offer, such person could acquire beneficial ownership of 10% or more of the outstanding of Common Shares.

## RIGHT TO PURCHASE BIOSPHERICS STOCK

If a person or group acquires or obtains the right to acquire 10% or more of the outstanding Common Shares (thereby becoming an "Acquiring Person") each holder of a Right (except those held by the Acquiring Person and its affiliates and associates) will have the right to purchase, upon exercise, Common Shares (or, in certain circumstances, Preferred Shares, Common Share equivalents or cash) having a value equal to two times the exercise price of the Right. In other words, the Rights holders other than the Acquiring Person may purchase Common Shares at a 50 % discount.

For example, at the exercise price of \$7.46 per Right, each Right not owned by an Acquiring Person would entitle its holder to purchase \$14.92 worth of Common Shares (or other consideration, as noted above) for \$7.46. Assuming a market value of \$3.73 per Common Share at such time, the holder of each valid Right would be entitled to purchase four (4) Common Shares for \$14.92.

## RIGHTS TO PURCHASE ACQUIRING PERSON STOCK

In the event that, at the time or after a person becomes an Acquiring Person, the Company is involved in a merger or other business combination in which (i) the Company is not the surviving corporation, (ii) Common Stock is changed or exchanged, or (iii) 50 % or more of the Company's consolidated assets or earning power are sold, then each Right (other than Rights that are or were owned by the Acquiring Person and certain related persons and transferees, which will thereafter be void) shall thereafter be exercisable for a number of shares of common stock of the acquiring company having a market value of two times the exercise price of the Right. In other words, a Rights holder may purchase the acquiring company's common stock at a 50 % discount.

## EXCHANGE OF SPHERIX STOCK FOR RIGHTS

At any time after any person or group becomes an Acquiring Person and before the Acquiring Person acquires 50 % or more of the outstanding Common Shares, the Board of Directors may exchange the Rights (other than Rights owned by the Acquiring Person which will have become void), in whole or in part, at an exchange ratio of one Common Share, or one one-hundredth of a Preferred Share (or a Common Share equivalent), per Right (subject to adjustment).

## REDEMPTION

The Rights are redeemable by the Company, at the direction of its Board of Directors, in whole but not in part at a price of \$.001 per Right at any time prior to the time that a person or a

group has become an Acquiring Person. Immediately upon redemption, the right to exercise will terminate and the only right of holders will be to receive the redemption price.

## AMENDMENTS

As long as the Rights are redeemable, the terms of the Rights may be amended by the Board of Directors in its discretion without the consent of the Rights holders. After that time, no amendment may adversely affect the interests of the Rights Holder (other than the Acquiring Person).

## TERMS OF PREFERRED SHARES

The Preferred Shares purchasable upon exercise of the Rights will not be redeemable. Each Preferred Share will be entitled to a minimum preferential quarterly dividend payment equal to the greater of \$0.005 per share and 100 times the dividend declared per Common Share. In the event of liquidation, the holders of the Preferred Shares will be entitled to a minimum preferential liquidation payment equal to the greater of \$.0001 per share and 100 times the payment made per Common Share. Each Preferred Share will have 100 votes per share, voting together with the Common Shares. In the event of any merger, consolidation or other transaction in which Common Shares are exchanged, each Preferred Share will be entitled to receive 100 times the amount received per Common Share.

## MISCELLANEOUS

The Purchase Price payable, and the number and kind of securities, cash or other property issuable, upon exercise of the Rights are subject to adjustment from time to time to prevent dilution (i) in the event of a stock dividend or distribution on, or a subdivision or combination of, the Common Shares, (ii) upon the grant to holders of the Common Shares of rights, options or warrants to subscribe for Common Shares or securities convertible into Common Shares at less than the current market price, (iii) upon the distribution to holders of the Common Shares of securities, cash, evidences of indebtedness or assets (excluding regular periodic cash dividends out of earnings or retained earnings) and (iv) in connection with recapitalizations of the Company or reclassifications of the Common Shares.

No fractional Common Shares or Preferred Shares will be required to be issued (other than fractions of Preferred Shares which are integral multiples of one one-hundredth of a Preferred Share, which may, at the election of the Company, be evidenced by depositary receipts) and in lieu thereof, an adjustment in cash will be made based on the market price of Common Shares or Preferred Shares on the last trading date prior to the date of exercise.

Because of the nature of the Preferred Shares' dividend, liquidation and voting rights, the value of the one one-hundredth interest in a Preferred Share that may be purchased upon exercise of each Right should approximate the value of one Common Share.

A copy of the Rights Agreement is attached as Exhibit 4.1 to this Current Report on Form 8-K. The foregoing description of the Rights Agreement does not purport to be complete and is qualified in its entirety by reference to such exhibits.

**Item 9.01      Financial Statements and Exhibits**

(c) Exhibits

Attached as exhibits to this form are the documents listed below:

**Exhibit**

**Document**

4.1

Rights Agreement, dated as of January 1, 2013

SIGNATURE

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

SPHERIX INCORPORATED

By:           /s/ Robert L. Clayton          

Robert L. Clayton,  
Chief Financial Officer, Treasurer, and  
Corporate Secretary

Date:   January 30, 2013

## RIGHTS AGREEMENT

THIS RIGHTS AGREEMENT, dated as of January 1, 2013, is made between Spherix Incorporated, a Delaware corporation (the "Company"), and Equity Stock Transfer, LLC, a \_\_\_\_\_ limited liability company (the "Rights Agent").

### RECITALS

The Board of Directors of the Company has authorized and declared the payment of a dividend of one preferred share purchase right (a "Right") for each share of Common Stock (as defined in Section 1) outstanding on the Record Date (as defined in Section 1) and has authorized the issuance of one Right for each share of Common Stock issued after the Record Date and before the earliest of the Distribution Date, the Redemption Date, the Exchange Date and the Expiration Date (as such terms are defined in Section 1) and in certain cases following the Distribution Date. Each Right will represent, as of the Record Date, the right to purchase one one-hundredth of one share of Preferred Stock (as defined in Section 1) upon the terms and subject to the conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the premises and the mutual agreements set forth in this Agreement, the parties hereby agree as follows:

Section 1. Certain Definitions. For purposes of this Agreement, the following terms have the meanings indicated:

(a) "Acquiring Person" means any Person who or which, together with all Affiliates and Associates of such Person, is (or has previously been, at any time after the date of this Agreement, whether or not such Person(s) continues to be) the Beneficial Owner of 10 percent or more of the Common Stock then outstanding (determined without taking into account any securities exercisable or exchangeable for, or convertible into, Common Stock, other than any such securities beneficially owned by the Acquiring Person and Affiliates and Associates of such Person). However, "Acquiring Person" shall not include any Exempt Person.

Notwithstanding the foregoing, a Person shall not become an "Acquiring Person" solely as the result of an acquisition of Common Stock by the Company or any Subsidiary which, by reducing the number of shares outstanding, increases the proportionate number of shares beneficially owned by such Person to 10 percent or more of the Common Stock then outstanding as determined above; provided, however, that if a Person becomes the Beneficial Owner of 10 percent or more of the Common Stock then outstanding as determined above solely by reason of such a share acquisition by the Company and such Person shall, after becoming the Beneficial Owner of such Common Stock, become the Beneficial Owner of any additional shares of Common Stock by any means whatsoever (other than as a result of the subsequent occurrence of a stock dividend or a subdivision of the Common Stock into a larger number of shares or a similar transaction), then such Person shall be deemed to be an "Acquiring Person."

Notwithstanding the foregoing, if a majority of the Board of Directors of the Company determines in good faith that a Person who would otherwise be an "Acquiring Person," as

defined pursuant to the foregoing provisions of this Section 1(a), has become such inadvertently, and such Person divests as promptly as practicable a sufficient number of Common Shares so that such Person would no longer be an "Acquiring Person," as defined pursuant to the foregoing provisions of this Section 1(a), then such Person shall not be deemed to be an "Acquiring Person" for any purposes of this Agreement. The determination of whether such Person's becoming an Acquiring Person shall have been inadvertent and the determination of whether the divestment of sufficient shares shall have been made as promptly as practicable shall be made by a majority of the Board of Directors of the Company.

(b) "Adjustment Number" has the meaning set forth in, and shall be calculated in accordance with, the Certificate of Designation, Preferences and Rights of Series A Participating Preferred Stock attached as Exhibit A hereto.

(c) "Affiliate" has the meaning given to such term in Rule 12b-2 of the General Rules and Regulations under the Exchange Act, as in effect on the date of this Agreement; provided that, for purposes of this Agreement, the term "Affiliate" shall not include any Person that is an Exempt Person.

(d) "Associate" has the meaning given to such term in Rule 12b-2 of the General Rules and Regulations under the Exchange Act, as in effect on the date of this Agreement; provided that, for purposes of this Agreement, the term "Associate" shall not include any Person that is an Exempt Person.

(e) Except as provided below, a Person shall be deemed to be the "Beneficial Owner" of, and shall be deemed to "beneficially own," any securities:

(1) which such Person or any Affiliate or Associate of such Person beneficially owns, directly or indirectly;

(2) which such Person or any Affiliate or Associate of such Person has, directly or indirectly, the right or obligation (whether or not then exercisable or effective) to acquire pursuant to any agreement, arrangement or understanding (whether or not in writing), or upon the exercise of conversion rights, exchange rights, rights (other than these Rights), warrants or options, or otherwise; provided, however, that a Person will not be deemed the Beneficial Owner of, or to beneficially own, securities tendered pursuant to a tender or exchange offer made by or on behalf of such Person or any Affiliate or Associate of such Person until such tendered securities are accepted for purchase or exchange;

(3) which such Person or any Affiliate or Associate of such Person has, directly or indirectly, the right (whether or not then exercisable) to vote, or to direct the voting of, pursuant to any agreement, arrangement or understanding (whether or not in writing); provided, however, that a Person shall not be deemed the Beneficial Owner of, or to beneficially own, any security pursuant to this clause (3) if the agreement, arrangement or understanding to vote, or to direct the voting of, such security (A) arises solely from a revocable proxy or consent given in response to a public proxy or consent solicitation made pursuant to, and in accordance with, the Exchange Act and applicable rules and regulations thereunder and (B) is not also then reportable

under Item 6 (or any comparable or successor item) of Schedule 13D under the Exchange Act (or any comparable or successor schedule or report);

(4) which such Person or any Affiliate or Associate of such Person has "beneficial ownership" of as determined pursuant to Rule 13d-3 of the General Rules and Regulations under the Exchange Act or any successor provision; or

(5) which are beneficially owned, directly or indirectly, by any other Person or any Affiliate or Associate of such other Person with whom such Person or any Affiliate or Associate of such Person has any agreement, arrangement or understanding (whether or not in writing) for the purpose of acquiring, holding, voting (except pursuant to a revocable proxy as described in clause (3) of this Section 1(e) or disposing of any securities of the Company.

Nothing in the preceding sentence shall cause a Person engaged in business as an underwriter of securities to be the "Beneficial Owner" of, or to "beneficially own," any securities acquired through such Person's participation in good faith in a firm commitment underwriting until the expiration of 40 days after the date of such acquisition.

Notwithstanding anything in this Agreement to the contrary, for purposes of this Agreement, no Person shall be treated as the "Beneficial Owner" of, or be deemed to "beneficially own," any securities solely by reason of the ownership of those securities by any other Person that is an Exempt Person.

Notwithstanding anything in this definition of Beneficial Ownership to the contrary, the phrase "then outstanding," when used with reference to a Person's Beneficial Ownership of securities of the Company, shall mean the number of such securities then issued and outstanding together with the number of such securities not then actually issued and outstanding which such Person would be deemed to own beneficially under the preceding provisions in this definition.

(f) "Business Combination" has the meaning set forth in Section 13 of this Agreement.

(g) "Business Day" means any day other than a Saturday, Sunday or a day on which banking institutions in the State of Maryland are authorized or obligated by law or executive order to close.

(h) "Close of Business" on any given date means 5:00 p.m., Baltimore, Maryland time, on such date; provided, however, that if such date is not a Business Day it shall mean 5:00 p.m. Baltimore, Maryland time, on the next succeeding Business Day.

(i) "Common Equivalent Share" has the meaning set forth in Section 11(c)(1)(B) of this Agreement.

(j) "Common Share" has the meaning set forth in Section 11(c)(1)(B) of this Agreement.

(k) "Common Stock" when used with reference to the Company means the Common Stock, par value \$0.0001 per share, of the Company (as the same may be changed by reason of any combination, subdivision or reclassification of the Common Stock). "Common Stock" when used with reference to any Person (other than the Company prior to a Business Combination) means shares of capital stock of such Person (if such Person is a corporation) of any class or series, or units of equity interests in such Person (if such Person is not a corporation) of any class or series, the terms of which shares or units do not limit (as a fixed amount and not merely in proportional terms) the amount of dividends or income payable or distributable on such shares or units or the amount of assets distributable on such shares or units upon any voluntary or involuntary liquidation, dissolution or winding up of such Person and do not provide that such shares or units are subject to redemption at the option of such Person, or any shares of capital stock or units of equity interests into which the foregoing shall be reclassified or changed; provided, however, that if at any time there are more than one such class or series of capital stock or equity interests in such Person, "Common Stock" of such Person will include all such classes and series substantially in the proportion of the total number of shares or other units of each such class or series outstanding at such time.

(l) "Current Market Price" per share or unit of Common Stock, Common Equivalent Share or any other security on any date is the average of the daily closing prices per share or unit of such Common Stock, Common Equivalent Share or any other security for the 30 consecutive Trading Days (as such term is hereinafter defined) immediately prior to such date for the purpose of any computation under this Agreement; provided, however, that in the event that the Current Market Price per share of Common Stock, Common Equivalent Share or any other security is determined during a period following the announcement by the issuer of such Common Stock, Common Equivalent Share or any other security of (i) a dividend or distribution on such Common Stock, Common Equivalent Share or any other security other than a regular quarterly cash dividend, or (ii) any subdivision, combination or reclassification of such Common Stock, Common Equivalent Share or any other security, and prior to the expiration of 30 Trading Days after the "ex-dividend" date for such dividend or distribution or the record date for such subdivision, combination or reclassification, then, and in each such case, the "Current Market Price" must be appropriately adjusted to take into account such dividend, distribution, subdivision, combination or reclassification. The closing price for each Trading Day shall be the last sale price, regular way, on such day, or, in case no such sale takes place on such day, the average of the closing bid and asked prices, regular way, on such day, in either case as reported in the principal consolidated transaction reporting system with respect to securities listed or admitted to trading on the NASDAQ Stock Market LLC ("NASDAQ") or, if the Common Stock, Common Equivalent Share or any other security is not listed or admitted to trading on the NASDAQ, as reported in the principal consolidated transaction reporting system with respect to securities listed on the principal United States national securities exchange on which the Common Stock, Common Equivalent Share or any other security is listed or admitted to trading or, if the Common Stock, Common Equivalent Share or any other security is not listed or admitted to trading on any national securities exchange, the last quoted price or, if not so quoted, the average of the high bid and low asked prices in the over-the-counter market, as reported by the National Association of Securities Dealers, Inc. Automated Quotations System or such other system then in use, or, if on any such date the Common Stock, Common Equivalent Share or any other security is not quoted by any such organization, the average of the closing bid and asked

prices as furnished by a professional market maker making a market in the security selected by a majority of the Board of Directors of the Company. If no such market maker is making a market, the fair market value of such shares or units on such day shall be determined in good faith by a majority of the Board of Directors of the Company, which determination shall be described in a statement filed with the Rights Agent and shall be binding and conclusive for all purposes. The term "Trading Day" means a day on which the principal United States national securities exchange on which the Common Stock, Common Equivalent Share or any other security is listed or admitted to trading is open for the transaction of business or, if the Common Stock, Common Equivalent Share or any other security is not listed or admitted to trading on any United States national securities exchange, but is traded in the over-the-counter market, then any day for which the high bid and low asked prices in the over-the-counter market are reported, or if the Common Stock, Common Equivalent Share or any other security is not traded in the over-the-counter market, then a Business Day. If the Preferred Stock is not publicly traded, the "Current Market Price" of the Preferred Stock shall be conclusively deemed to be the Current Market Price of the Common Stock as determined pursuant to this paragraph of Section 1 (appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date hereof), multiplied by the Adjustment Number. Each Common Equivalent Share consisting of preferred stock other than Preferred Stock shall be conclusively deemed to have the same "Current Market Price" as a Common Equivalent Share consisting of Preferred Stock.

(m) "Distribution Date" means the earlier of (i) the tenth (10<sup>th</sup>) day after the Stock Acquisition Date and (ii) the tenth (10<sup>th</sup>) Business Day after commencement of or public disclosure of an intention to commence (including, without limitation, any such commencement or public disclosure which occurs before or after the date of this Agreement and prior to the issuance of the Rights) a tender offer or exchange offer by a Person if, after acquiring the maximum number of securities sought pursuant to such offer, such Person, or any Affiliate or Associate of such Person, would be an Acquiring Person. A majority of the Board of Directors of the Company may defer the date set forth in clause (ii) of the preceding sentence to a specified later date or to an unspecified later date to be determined by a subsequent action or event.

(n) "Exchange Act" means the Securities Exchange Act of 1934, as amended, and any successor statute.

(o) "Exchange Date" means the time at which Rights are exchanged pursuant to Section 11(c)(2).

(p) "Exempt Event" means with respect to any Person, the acquisition by such Person of Beneficial Ownership of Common Stock solely as a result of the occurrence of a Triggering Event and the effect of such Triggering Event on the last proviso of clause (ii) of the definition of Beneficial Owner, other than a Triggering Event in which such Person becomes an Acquiring Person.

(q) "Exempt Person" means (i) the Company, (ii) any Subsidiary of the Company, (iii) any employee benefit plan of the Company or of any Subsidiary of the Company, (iv) any Person holding Common Stock for any such employee benefit plan or for employees of the

Company or of any Subsidiary of the Company pursuant to the terms of any such employee benefit plan.

(r) "Exercise Amount" means the amount payable by the holder as a condition to the exercise of one Right. Until and unless it shall be adjusted in accordance with this Agreement, the Exercise Amount shall be \$7.46.

(s) "Expiration Date" means the Close of Business on December 31, 2017.

(t) "Person" means any individual, firm, corporation, limited liability company, partnership, joint venture, association, trust, unincorporated organization or other entity, and shall include any "group" as that term is used in Rule 13d-5(b) under the Exchange Act (or any successor provision).

(u) "Preferred Stock" means the Company's Series A Participating Preferred Stock, par value \$0.0001 per share, having the rights and preferences set forth in the Certificate of Designation, Preferences and Rights of Series A Participating Preferred Stock, attached hereto as Exhibit A.

(v) "Principal Party" means (i) in the case of any Business Combination described in clause (i), (ii) or (iii) of the first sentence of Section 13(a), (A) the Person that is the issuer of any securities into which shares of Common Stock of the Company are converted or for which they are exchanged in such Business Combination or, if there is more than one such issuer, the issuer of the Common Stock which has the greatest aggregate market value or (B) if no securities are so issued, the Person that survives or results from the Business Combination or, if there is more than one such Person, the Person the Common Stock of which has the greatest aggregate market value, and (ii) in the case of any Business Combination described in clause (iv) of the first sentence in Section 13(a), the Person that receives the greatest portion of the assets or earning power transferred pursuant to such Business Combination or, if each Person that is a party to such Business Combination receives the same portion of the assets or earning power so transferred or if the Person receiving the greatest portion of the assets or earning power cannot reasonably be determined, whichever of such Persons is the issuer of the Common Stock which has the greatest aggregate market value; provided, however, that in any such case, if the Common Stock of such Person is not at such time and has not been continuously over the preceding 12-month period registered under Section 12 of the Exchange Act and such Person is a direct or indirect Subsidiary of one or more other Persons, then (x) "Principal Party" refers to whichever of such other Persons has Common Stock that is and has been continuously over the preceding 12-month period registered under Section 12 of the Exchange Act; (y) if the Common Stocks of two or more of such other Persons are and have been so registered, "Principal Party" refers to whichever of such other Persons is the issuer of the Common Stock which has the greatest aggregate market value; or (z) if the Common Stock of none of such other Persons has been so registered, "Principal Party" refers to whichever of such other Persons (other than an individual) is the Person which has the equity securities with the greatest aggregate market value. In case such Person is owned, directly or indirectly, by a joint venture formed by two or more Persons that are not owned, directly or indirectly, by the same Person, the rules set forth above apply to each of the chains of ownership having an interest in such joint venture as if such Person

were a Subsidiary of both or all of such joint ventures and the Principal Parties in each such chain shall bear the obligations set forth in Section 13 in the same ratio as their direct or indirect interests in such Person bear to the total of such interests.

(w) "Purchase Price" means: (i) the price at which one one-hundredth of a share of Preferred Stock shall be purchasable with the Rights (the Purchase Price shall be \$7.46 per one one-hundredth of a share of Preferred Stock until and unless it shall be adjusted pursuant to this Agreement) and (ii) immediately after the Trigger Date, the price per Common Share for which Common Shares shall be purchasable with the Rights. Thereafter the term "Purchase Price" as applied with respect to each kind of stock or other property purchasable with the Rights as a result of adjustments prescribed by this Agreement shall mean the price at which each share of such stock or the smallest available unit of such other property is purchasable with the Rights.

(x) "Record Date" means the Close of Business on January 1, 2013.

(y) "Redemption Date" means the time at which the Rights are scheduled to be redeemed as provided in Section 23.

(z) "Redemption Price" has the meaning given to such term in Section 23.

(aa) "Securities Act" means the Securities Act of 1933, as amended, and any successor statute.

(bb) "Stock Acquisition Date" means the first date of public disclosure by the Company, an Acquiring Person or otherwise that an Acquiring Person has become such.

(cc) "Subsidiary" has the meaning given to such term in Rule 12b-2 of the General Rules and Regulations under the Exchange Act, as in effect on the date of this Agreement.

(dd) "Trigger Date" means the first date upon which a Person becomes an Acquiring Person.

(ee) "Triggering Event" shall mean a Person becoming an Acquiring Person.

Section 2. Appointment of Rights Agent. The Company hereby appoints the Rights Agent to act as agent for the Company in accordance with the terms and conditions hereof, and the Rights Agent hereby accepts such appointment. The Company may from time to time appoint such co-Rights Agents as it may deem necessary or desirable.

Section 3. Issuance of Rights Certificates.

(a) Until the Distribution Date: (i) the Rights shall be issued in respect of and shall be evidenced by the certificates representing the shares of Common Stock issued and outstanding on the Record Date or, in the case of uncertified Common Shares registered in book entry form ("Book Entry Shares"), by notation in book entry accounts reflecting the ownership of such Common Stock, and shares of Common Stock issued or which become outstanding after the

Record Date and prior to the earliest of the Distribution Date, the Redemption Date, the Exchange Date and the Expiration Date (which certificates for Common Stock and Book Entry Shares shall be deemed to also be certificates evidencing the Rights), and not by separate certificates; (ii) the registered holders of such shares of Common Stock shall also be the registered holders of the Rights associated with such shares; and (iii) the Rights shall be transferable only in connection with the transfer of shares of Common Stock, and the surrender for transfer of any certificate for such shares of Common Stock shall also constitute the surrender for transfer of the Rights associated with such shares. As soon as practicable after the Company has notified the Rights Agent of the occurrence of the Distribution Date, the Rights Agent shall, at the expense of the Company (except as otherwise provided in Section 7(e)), mail, by first-class, insured, postage prepaid mail, to each record holder of the Common Stock as of the Close of Business on the Distribution Date, as shown by the records of the Company, at the address of such holder shown on such records, one or more certificates evidencing the Rights ("Rights Certificates"), in substantially the form of Exhibit B hereto, evidencing one Right (as adjusted from time to time pursuant to this Agreement) for each share of Common Stock so held. From and after the Distribution Date, the Rights will be evidenced solely by such Rights Certificates.

(b) Rights shall be issued in respect of all shares of Common Stock which are issued or sold by the Company after the Record Date but prior to the earliest of the Distribution Date, the Redemption Date, the Exchange Date and the Expiration Date. In addition, in connection with the issuance or sale of Common Stock by the Company following the Distribution Date and prior to the earliest of the Redemption Date, the Exchange Date and the Expiration Date, the Company shall, with respect to Common Stock so issued or sold (i) pursuant to the exercise of stock options issued prior to the Distribution Date or under any employee plan or arrangement created prior to the Distribution Date, or (ii) upon the exercise, conversion or exchange of securities issued by the Company prior to the Distribution Date, issue Rights and Rights Certificates representing the appropriate number of Rights in connection with such issuance or sale; provided, however, that (x) no such Rights and Rights Certificate shall be issued if, and to the extent that, the Company shall be advised by counsel that such issuance would create a significant risk of material adverse tax consequences to the Company or the Person to whom such Rights Certificate would be issued and (y) no such Rights and Rights Certificates shall be issued if, and to the extent that, appropriate adjustment shall otherwise have been made in lieu of the issuance thereof. Certificates issued after the Record Date representing shares of Common Stock outstanding on the Record Date and shares of Common Stock issued after the Record Date but prior to the earliest of the Distribution Date, the Redemption Date, the Exchange Date and the Expiration Date shall have impressed, printed, or written on, or otherwise affixed to them a legend substantially in the following form:

This certificate also evidences and entitles the holder hereof to certain Rights as set forth in a Rights Agreement between Spherix Incorporated (the "Company") and Equity Stock Transfer, LLC as Rights Agent, dated as of January 1, 2013 (the "Rights Agreement"), the terms of which are hereby incorporated herein by reference and a copy of which is on file at the principal executive offices of the Company. Under certain circumstances, as set forth in the

Rights Agreement, such Rights will be evidenced by separate certificates and will no longer be evidenced by this certificate. The Company will mail to the holder of this certificate a copy of the Rights Agreement without charge after receipt of a written request therefor. Under certain circumstances, Rights that were, are or become beneficially owned by Acquiring Persons or their Associates or Affiliates (as such terms are defined in the Rights Agreement) may become null and void and the holder of any of such Rights (including any subsequent holder) shall not have any right to exercise such Rights.

With respect to any Book Entry Shares, a legend in substantially similar form will be included in a notice to the record holder of such shares in accordance with applicable law.

Notwithstanding this Section 3(b), the omission of the legend required hereby, the inclusion of a legend that makes reference to a rights agreement other than this Agreement or the failure to provide notice thereof will not affect the enforceability of any part of this Agreement or the rights of any holder of Rights.

(c) Notwithstanding any other provision of this Agreement, neither the Company, the Rights Agent nor anyone else shall have any obligation to issue any Rights Certificate to an Acquiring Person or to anyone else in whose hands the Rights nominally represented by such Certificate shall be null and void either initially or in connection with a request to register a transfer of Rights represented by a certificate previously issued. Furthermore, neither the Company, the Rights Agent nor anyone else shall be obligated to issue Rights Certificates to any person making a tender offer which if consummated could render such person an Acquiring Person or to any Affiliate or Associate of such person until and unless the tender offer is withdrawn and the person shall have established to the Company's reasonable satisfaction that such person does not intend to become an Acquiring Person. The Company shall be entitled to require any person claiming the right to receive a Rights Certificate to present such evidence as the Company shall require in good faith to establish to the Company's satisfaction that the Rights represented by that Certificate have not become null and void under the provisions in Section 7(e) or that the Company is not entitled to withhold such Certificate under the provisions of the preceding sentence.

Section 4. Form of Rights Certificates. The Rights Certificates (and the form of election to purchase shares and form of assignment to be printed on the reverse thereof) shall be in substantially the form of Exhibit B hereto and may have such marks of identification or designation and such legends, summaries or endorsements printed thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Agreement, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any stock exchange on which the Rights may from time to time be listed, or to conform to usage. Subject to the provisions of this Agreement, the Rights Certificates, whenever issued, shall be dated as of the Distribution Date, and on their face shall entitle the holders thereof to purchase such number of shares of Preferred Stock as shall be set forth therein

at the Purchase Price set forth therein, but the number and kind of such securities and the Purchase Price shall be subject to adjustment as provided in this Agreement.

Section 5. Execution, Countersignature and Registration.

(a) Each Rights Certificate shall be executed on behalf of the Company by the Company's Chief Executive Officer, President, or any Vice President, either manually or by facsimile signature, and shall have affixed thereto the Company's seal or a facsimile thereof which shall be attested by the Company's Secretary or an Assistant Secretary, either manually or by facsimile signature. Each Rights Certificate shall be countersigned by the Rights Agent either manually or, if permitted by the Company, by facsimile signature and shall not be valid for any purpose unless so countersigned. In case any officer of the Company who shall have signed a Rights Certificate shall cease to be such officer of the Company before countersignature by the Rights Agent and issuance and delivery by the Company, such Rights Certificate nevertheless may be countersigned by the Rights Agent and issued and delivered with the same force and effect as though the Person who signed such Rights Certificate had not ceased to be such officer of the Company; and any Rights Certificate may be signed on behalf of the Company by any Person who, at the actual date of the execution of such Rights Certificate, shall be a proper officer of the Company to sign such Rights Certificate, although at the date of the execution of this Agreement any such Person was not such an officer.

(b) Following the Distribution Date, the Rights Agent shall keep or cause to be kept, at its principal stock transfer office, books for registration and transfer of the Rights Certificates issued hereunder. Such books shall show the names and addresses of the respective holders of the Rights Certificates, the number of Rights evidenced by each Rights Certificate, and the certificate number and the date of issuance of each Rights Certificate.

Section 6. Transfer, Division, Combination and Exchange of Rights Certificates; Mutilated, Destroyed, Lost or Stolen Rights Certificates.

(a) Subject to the provisions of Section 3(c) and Section 14, at any time after the Close of Business on the Distribution Date and at or prior to the Close of Business on the earliest of the Redemption Date, the Exchange Date and the Expiration Date, any Rights Certificate or Rights Certificates may be transferred, divided, combined or exchanged for another Rights Certificate or Rights Certificates, entitling the registered holder to purchase a like number of shares of Preferred Stock (or following a Triggering Event or a Business Combination, other securities, cash or other property, as the case may be) as the Rights Certificate or Rights Certificates surrendered then entitled such holder to purchase. Any registered holder desiring to transfer, divide, combine or exchange any Rights Certificate shall make such request in writing delivered to the Rights Agent, and shall surrender the Rights Certificate or Rights Certificates to be transferred, divided, combined or exchanged at the principal corporate office of the Rights Agent. Thereupon the Rights Agent shall countersign and deliver to the Person entitled thereto a Rights Certificate or Rights Certificates, as the case may be, as so requested. As a condition to such transfer, division, combination or exchange, the Company may require payment by the surrendering holder of a sum sufficient to cover any tax or governmental charge that may be imposed in connection therewith. Neither the Rights Agent nor the Company shall be obligated

to take any action whatsoever with respect to the transfer of any such surrendered Rights Certificate until the registered holder shall have duly completed and executed the form of assignment on the reverse side of such Rights Certificate and shall have provided such additional evidence of the identity of the Beneficial Owner (or such former or proposed Beneficial Owner) thereof or such Beneficial Owner's Affiliates or Associates as the Company shall reasonably request.

(b) Upon receipt by the Company and the Rights Agent of evidence reasonably satisfactory to them of the loss, theft, destruction or mutilation of a Rights Certificate, and, in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to them, and reimbursement to the Company and the Rights Agent of all reasonable expenses incidental thereto, and upon surrender to the Rights Agent and cancellation of the Rights Certificate if mutilated, the Company will make and deliver a new Rights Certificate of like tenor to the Rights Agent for delivery to the registered owner in lieu of the Rights Certificate so lost, stolen, destroyed or mutilated.

Section 7. Exercise of Rights; Purchase Price; Expiration Date of Rights.

(a) Each Right shall entitle (except as otherwise provided in this Agreement) the registered holder thereof, upon the exercise thereof as provided in this Agreement, to purchase, for the Purchase Price, at any time after the Distribution Date and prior to the earliest of the Expiration Date, the Exchange Date and the Redemption Date, one one-hundredth (1/100) of a share of Preferred Stock, subject to adjustment from time to time as provided in Sections 11 and 13.

(b) The registered holder of any Rights Certificate may exercise the Rights evidenced thereby (except as otherwise provided in this Agreement) in whole or in part (except that no fraction of a Right may be exercised) at any time after the Distribution Date and prior to the earliest of the Expiration Date, the Exchange Date and the Redemption Date, by surrendering the Rights Certificate, with the form of election to purchase on the reverse side thereof duly executed, to the Rights Agent at the principal stock transfer office of the Rights Agent, together with payment of the Exercise Amount for each Right exercised.

(c) Upon receipt of a Rights Certificate representing exercisable Rights, with the form of election to purchase duly executed, accompanied by payment of the Exercise Amount for each Right exercised and an amount equal to any applicable transfer tax required to be paid by the surrendering holder pursuant to Section 9(d), the Rights Agent shall, subject to the provisions of this Agreement, thereupon promptly (i)(A) requisition from any transfer agent for the Preferred Stock (or make available, if the Rights Agent is the transfer agent for such shares) certificates for the Preferred Stock (or other securities, as the case may be) to be purchased (and the Company hereby irrevocably authorizes its transfer agent to comply with all such requests), or (B) if the Company shall have elected to deposit the total number of shares of Preferred Stock (or other securities, as the case may be) issuable upon exercise of the Rights with a depositary agent, requisition from the depositary agent depositary receipts representing such Preferred Stock (or other securities, as the case may be) as are to be purchased (in which case certificates for the Preferred Stock (or other securities, as the case may be) represented by such receipts shall be

deposited by the transfer agent with the depository agent) and the Company shall direct the depository agent to comply with such request; (ii) after receipt of such certificates or depository receipts, cause the same to be delivered to or upon the order of the registered holder of such Rights Certificate, registered in such name or names as may be designated by such holder; and (iii) if appropriate, requisition from the Company the amount of cash to be paid in lieu of issuance of fractional shares in accordance with Section 14 of this Agreement and, promptly after receipt thereof, cause the same to be delivered to or upon the order of the registered holder of such Rights Certificate. In the event that the Company is obligated to issue other securities (including shares of Common Stock) of the Company, pay cash and/or distribute other property pursuant to this Agreement, the Company will make all arrangements necessary so that such other securities, cash and/or other property are available for distribution by the Rights Agent, if and when appropriate.

(d) In case the registered holder of any Rights Certificate shall exercise less than all the Rights evidenced thereby, a new Rights Certificate evidencing Rights equivalent to the Rights remaining unexercised shall be issued by the Rights Agent and delivered to the registered holder of such Rights Certificate or to his duly authorized assigns, subject to the provisions of Section 3(c) and Section 14.

(e) Notwithstanding anything in this Agreement to the contrary, any Rights that are or were formerly beneficially owned on or after the earlier of the Distribution Date and the Trigger Date by (i) an Acquiring Person or any Associate or Affiliate of an Acquiring Person, (ii) a direct or indirect transferee of an Acquiring Person (or of an Associate or Affiliate of such Acquiring Person) who becomes a transferee after the Acquiring Person becomes such, or (iii) a direct or indirect transferee of an Acquiring Person (or of an Associate or Affiliate of such Acquiring Person) who becomes a transferee prior to or concurrently with the Acquiring Person becoming such and receives such Rights pursuant to either (A) a direct or indirect transfer (whether or not for consideration) from the Acquiring Person (or from an Associate or Affiliate of such Acquiring Person) to holders of equity interests in such Acquiring Person (or to holders of equity interests in any Associate or Affiliate of such Acquiring Person) or to any Person with whom the Acquiring Person (or an Associate or Affiliate of such Acquiring Person) has any continuing agreement, arrangement or understanding regarding the transferred Rights or (B) a direct or indirect transfer which a majority of the Board of Directors of the Company determines is part of a plan, arrangement or understanding which has as a primary purpose or effect the avoidance of this Section 7(e), shall, immediately upon the occurrence of a Triggering Event and without any further action, be null and void and no holder of such Rights shall have any rights whatsoever with respect to such Rights whether under this Agreement or otherwise; provided, however, that, in the case of transferees under clause (ii) or clause (iii) above, any Rights beneficially owned by such transferee shall be null and void only if and to the extent such Rights were formerly beneficially owned by a Person who was, at the time such Person beneficially owned such Rights, or who later became, an Acquiring Person or an Affiliate or Associate of such Acquiring Person. The Company shall use all reasonable efforts to ensure that the provisions of this Section 7(e) are complied with, but shall have no liability to any holder of a Rights Certificate or to any other Person as a result of the Company's failure to make, or any delay in making (including any such failure or delay by the Board of Directors of the Company)

any determinations with respect to an Acquiring Person or its Affiliates, Associates or transferees hereunder.

(f) Notwithstanding anything in this Agreement to the contrary, neither the Rights Agent nor the Company shall be obligated to undertake any action with respect to the registered holder of a Rights Certificate upon the occurrence of any purported exercise as set forth in this Section 7 unless such registered holder shall have (i) completed and signed the certificate contained in the form of election to purchase set forth on the reverse side of the Rights Certificate surrendered for such exercise and (ii) provided such additional evidence of the identity of the Beneficial Owner (or former or proposed Beneficial Owner) thereof or the Affiliates or Associates of such Beneficial Owner (or former or proposed Beneficial Owner) as the Company shall reasonably request.

Section 8. Cancellation and Destruction of Rights Certificates. All Rights Certificates surrendered for the purpose of exercise, transfer, division, combination or exchange shall, if surrendered to the Company or to any of its agents, be delivered to the Rights Agent for cancellation or in canceled form, or, if surrendered to the Rights Agent, shall be canceled by it, and no Rights Certificates shall be issued in lieu thereof except as expressly permitted by the provisions of this Agreement. The Company shall deliver to the Rights Agent for cancellation and retirement, and the Rights Agent shall so cancel and retire, any other Rights Certificate purchased or acquired by the Company otherwise than upon the exercise thereof. The Rights Agent shall deliver all canceled Rights Certificates to the Company, or shall, at the written request of the Company, destroy such canceled Rights Certificates, and in such case shall deliver a certificate of destruction thereof to the Company.

Section 9. Reservation and Availability of Preferred Stock.

(a) The Company covenants and agrees that it will use all reasonable efforts to cause to be reserved and kept available at all times out of its authorized and unissued shares of Preferred Stock or its authorized and issued shares of Preferred Stock held in its treasury (and, following the occurrence of a Triggering Event or a Business Combination, out of its authorized and unissued shares of Common Stock and/or other securities or out of its authorized and issued shares of Common Stock and/or other securities held in its treasury) free from preemptive rights or any right of first refusal, a sufficient number of shares of Preferred Stock (and, following the occurrence of a Triggering Event, shares of Common Stock and/or other securities) to permit the exercise in full of all Rights from time to time outstanding.

(b) The Company further covenants and agrees, so long as the Preferred Stock (and, following the occurrence of a Triggering Event or a Business Combination, shares of Common Stock and/or other securities) issuable upon the exercise of Rights may be listed on any United States national securities exchange or quoted on any automated quotation system, to use its reasonable efforts to cause, from and after the time that the Rights become exercisable, all such shares and/or other securities reserved for such issuance to be listed on such exchange or quoted on such automated quotation system upon official notice of issuance upon such exercise.

(c) The Company further covenants and agrees that it will use all reasonable efforts to take all such action as may be necessary to ensure that all shares of Preferred Stock (and, following the occurrence of a Triggering Event or a Business Combination, shares of Common Stock and/or other securities) delivered upon the exercise of Rights shall, at the time of delivery of the certificates for such shares and/or such other securities (subject to payment of the Purchase Price), be duly and validly authorized and issued, fully paid, nonassessable, freely tradable, not subject to liens or encumbrances, and free of preemptive rights, rights of first refusal or any other restrictions or limitations on the transfer or ownership thereof, of any kind or nature whatsoever.

(d) The Company further covenants and agrees that it will pay when due and payable any and all federal and state transfer taxes and charges which may be payable in respect of the original issuance or delivery of the Rights Certificates or of any certificates for shares of Preferred Stock (or Common Stock and/or other securities, as the case may be) upon the exercise of Rights. The Company shall not, however, be required to (i) pay any transfer tax which may be payable in respect of any transfer involved in the issuance or delivery of any Rights Certificates or the issuance or delivery of any certificates for shares of Preferred Stock (or Common Stock and/or other securities as the case may be) to a Person other than, or in a name other than that of, the registered holder of the Rights Certificate evidencing Rights surrendered for exercise or (ii) transfer or deliver any Rights Certificate or issue or deliver any certificates for shares of Preferred Stock (or Common Stock and/or other securities as the case may be) upon the exercise of any Rights until any such tax shall have been paid (any such tax being payable by the holder of such Rights Certificate at the time of surrender) or until it has been established to the Company's satisfaction that no such tax is due.

(e) The Company shall use all reasonable efforts to (i) as soon as practicable following a Triggering Event (or such earlier time following the Distribution Date as may be required by law), prepare and file a registration statement on an appropriate form under the Securities Act with respect to the securities purchasable upon exercise of the Rights, (ii) cause such registration statement to become effective as soon as practicable after such filing, and (iii) cause such registration statement to remain effective (with a prospectus at all times meeting the requirements of the Securities Act) until the earlier of (A) the date as of which Rights are no longer exercisable for such securities and (B) the Expiration Date. The Company shall also take such action as may be necessary or appropriate under, or to ensure compliance with, the securities or "blue sky" laws of the various states in connection with the exercise of the Rights. The Company may temporarily suspend, for a period of time not to exceed 120 days after the date of a Triggering Event, the exercisability of the Rights in order to prepare and file such registration statement and permit it to become effective. Upon any such suspension, the Company shall make a public announcement stating that the exercisability of the Rights has been temporarily suspended, as well as a public announcement at such time as the suspension is no longer in effect.

Section 10. Preferred Stock Record Date. Each Person in whose name any certificate for shares of Preferred Stock (or Common Stock and/or other securities, as the case may be) is issued upon the exercise of Rights shall for all purposes be deemed to have become the holder of record of the Preferred Stock (or Common Stock and/or other securities, as the case may be) represented thereby on, and such certificate shall be dated, the date upon which the Rights

Certificate evidencing such Rights was duly surrendered and payment of the Purchase Price (and any applicable transfer taxes) was made; provided, however, that if the date of such surrender and payment is a date upon which the Preferred Stock (or Common Stock and/or other securities, as the case may be) transfer books of the Company are closed, such Person shall be deemed to have become the record holder of such shares (and/or such other securities, as the case may be) on, and such certificate shall be dated, the next succeeding Business Day on which the Preferred Stock (or Common Stock and/or other securities, as the case may be) transfer books of the Company are open. Prior to the exercise of the Rights evidenced thereby, the holder of a Rights Certificate is not entitled to any rights of a holder of Preferred Stock (or any other security of the Company) for which the Rights are exercisable, including the right to vote, to receive dividends or other distributions, or to exercise any preemptive rights, and is not be entitled to receive any notice of any proceedings of the Company, except as provided herein.

Section 11. Adjustments to Purchase Price, Number of Shares or Number of Rights. The Purchase Price, the number and kind of securities, cash and other property obtainable upon exercise of each Right and the number of Rights outstanding shall be subject to adjustment from time to time as provided in this Section 11.

(a) Adjustments Prior to Trigger Date:

(1) In the event the Company shall at any time after the date of this Agreement and prior to the Trigger Date (i) pay a dividend or make a distribution on the Common Stock payable in shares of Common Stock, (ii) subdivide (by a stock split or otherwise) the outstanding Common Stock into a larger number of shares, (iii) combine (by a reverse stock split or otherwise) the outstanding Common Stock into a smaller number of shares (any of the actions described in clauses (i), (ii) or (iii) are herein called a "stock split") then:

(A) The number of Rights outstanding shall be adjusted so that after giving effect to such stock split the number of Rights outstanding shall be exactly equal to the number of shares of Common Stock outstanding (and so that prior to the Distribution Date one Right shall be associated with every share of Common Stock outstanding after such stock split);

(B) The Exercise Amount shall be adjusted by multiplying the Exercise Amount in effect immediately prior to such stock split by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such stock split and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such stock split;

(C) The Purchase Price for each one one-hundredth of a share of Preferred Stock shall not change; and

(D) The fraction of a share of Preferred Stock purchasable with each Right immediately after such stock split shall be equal to the product derived by multiplying the fraction of a share of Preferred Stock purchasable with each Right immediately prior to such stock split times the fraction cited in clause (B) above.

The following example illustrates the intended operation of the preceding provisions. Assume that initially each Right would (when and if it became exercisable) entitle its holder to purchase one one-hundredth of a share of Preferred Stock for \$200 (and accordingly the initial Exercise Amount and the initial Purchase Price per one one-hundredth of a share of Preferred Stock are each \$200). Assume further that prior to the Distribution Date, the Company splits its Common Stock two for one (thereby doubling the number of shares of Common Stock outstanding). The intended operation of the preceding adjustment provisions is that: (i) the number of Rights outstanding would also double; (ii) one Right would be associated with each share of Common Stock outstanding after the stock split; (iii) each Right would have an Exercise Amount equal to \$100; (iv) each Right will entitle its holder (when and if the Right becomes exercisable) to purchase one two-hundredth of one share of Preferred Stock; and (v) the Purchase Price for each one one-hundredth of a share of Preferred Stock would remain \$200 so that the price for each one two-hundredth of a share of Preferred Stock purchasable with each Right would be \$100.

(2) Adjustment in Rights Certificates: In the event the Distribution Date shall occur and the Company shall issue separate certificates to represent the Rights, the following provisions shall thereafter apply:

(A) In the event the number of Rights outstanding are increased pursuant to Section 11(a)(1), the Company shall as promptly as reasonably possible distribute to the record holders of the Rights on the record date for the stock split giving rise to the increase in the number of Rights certificates representing the additional Rights issuable by reason of such stock split.

(B) In the event the number of Rights outstanding are reduced pursuant to Section 11(a) by reason of the occurrence of a reverse stock split or its functional equivalent, then each Rights Certificate outstanding prior to such reverse stock split shall thereafter represent the reduced number of Rights into which the Rights represented by such certificate immediately prior to such reverse stock split shall have been converted by reason of the occurrence of that reverse stock split.

(b) Basic Triggering Event Adjustments: Upon the first occurrence of a Triggering Event (except as otherwise provided in this Agreement), each Right shall be changed so that immediately after the Triggering Event:

(1) it shall no longer be exercisable for Preferred Stock but rather shall be exercisable for Common Stock (subject to adjustment as provided in Section 11(c));

(2) the number of shares of Common Stock which may be acquired (upon exercise of each Right and payment of the Exercise Amount) shall be equal to the result obtained by dividing (x) 50 percent of the Current Market Price per share of Common Stock on the date of the occurrence of the Triggering Event into (y) the Exercise Amount in effect immediately prior to the Triggering Event; and

(3) the Purchase Price per Common Share purchasable with each Right shall be equal to 50 percent of the Current Market Price per share of Common Stock on the date of the occurrence of the Triggering Event.

(c) Other Post Triggering Event Adjustments.

(1) Use of Common Equivalent Shares or Cash: In the event that the number of shares of Common Stock which are authorized by the Company's certificate of incorporation, but which are not outstanding or reserved for issuance for purposes other than upon exercise of the Rights ("Available Common Stock"), is not sufficient to permit the exercise in full of the Rights after the adjustment made in accordance with Section 11(b), then:

(A) First, the Available Common Stock shall be allocated among all of the then-outstanding and exercisable Rights so that each Right shall entitle its holder to receive (upon exercise of the Right and payment of the Exercise Amount) the same amount of Available Common Stock and (ii) second, the Board of Directors of the Company shall promptly take appropriate action to declare that each Right shall additionally entitle its holder to receive (x) a number of Common Equivalent Shares equal to the remainder derived by subtracting the number of shares of Available Common Stock allocated to each Right in the preceding clause (i) from the total number of shares of Common Stock which would have been purchasable with such Right if the Corporation had a sufficient number of shares of Common Stock to permit the Right to be exercisable entirely for Common Stock (such remainder being referred to herein as the "Unallocated Shares"), (y) cash in an amount equal to the Current Value of the Unallocated Shares, or (z) any combination of the foregoing determined by the Board of Directors of the Company so long as each Right entitles its holder to receive the same kind and amount of Common Equivalent Shares and the same amount of cash as the holder of each other Right. For purposes of the preceding sentence, the "Current Value" of a particular number of Unallocated Shares shall be equal to the product derived by multiplying that particular number times the greater of (i) the Current Market Price (calculated as prescribed in Section 1) for the Common Stock on the day on which the Board of Directors determines to make a substitution of cash for such Unallocated Shares (the "Substitution Date") or (ii) the closing price per share (calculated as prescribed in Section 1) for the Common Stock on the Trading Day immediately prior to the Substitution Date.

(B) For purposes of this Agreement, a "Common Equivalent Share" shall be a share or fraction of a share of preferred stock (including, but not limited to, Preferred Stock), as follows: (i) with respect to Preferred Stock, a Common Equivalent Share shall be the fraction of a share of Preferred Stock equal to the reciprocal of the Adjustment Number in effect at the time the term shall be applied and/or the unit of Preferred Stock issued and (ii) with respect to preferred stock other than Preferred Stock, a Common Equivalent Share shall be a share or fraction of a share of such preferred stock that the Board of Directors of the Company deems to represent substantially the same proportionate interest in the Company as a Common Equivalent Share represented by such fraction of a share of Preferred Stock and to have a dividend rate and other characteristics as similar as possible to such fraction of a share of Preferred Stock. The term "Common Share" whenever it is used in this Agreement means both a share of Common Stock and a Common Equivalent Share.

(C) If circumstances after the initial Trigger Date require the use of Common Equivalent Shares, the Company shall use its best efforts to obtain authorization to issue (i) a sufficient quantity of Common Stock to permit Common Stock to be issued upon exercise of the Rights and/or any exercise of the exchange right under the following Section and (ii) a sufficient quantity of Common Equivalent Shares as may be necessary or appropriate to permit Common Equivalent Shares to be issued upon exercise of the Rights and/or any exercise of the exchange right under the following Section. Each time the Company's authorized Common Stock shall be increased, the adjustment required under the preceding paragraphs shall be redone to maximize the amount of Common Stock issuable upon exercise of the Rights. To the extent excess authorized Common Stock remains after the readjustment required by the preceding sentence, the holder of any outstanding Common Equivalent Share shall have the right at any time to require the Company to exchange that share for a share of Common Stock.

(D) In no event, however, shall the Company be obligated to reserve any Common Stock for issuance under the Rights until and unless a Triggering Event actually occurs.

(E) In no event shall the Company issue any Preferred Stock except for issuances caused by exercise of the Rights and except for issuances required by this Section 11(c)(1), Section 11(c)(2) or Section 11(d)(6).

(2) Exchange Option:

(A) At any time after the occurrence of a Triggering Event and prior to (i) the time any Person (other than an Exempt Person), together with all Affiliates and Associates of such Person, becomes the Beneficial Owner of 50 percent or more of the Common Stock then outstanding and (ii) the occurrence of a Business Combination, the Board of Directors of the Company may, at its option, cause the Company to exchange for all or part of the then-outstanding and exercisable Rights, Common Shares at an exchange ratio of one Common Share per Right, appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date of this Agreement (such exchange ratio being referred to herein as the "Exchange Ratio"). Any partial exchange shall be effected on a pro rata basis based on the number of Rights (other than Rights which have become void pursuant to the provisions of Section 7(e) hereof) held by each holder of Rights.

(B) Immediately upon the action of the Board of Directors of the Company ordering the exchange of any particular Rights pursuant to this Section 11(c)(2) and without any further action and without any notice, the right to exercise those particular Rights shall terminate and the only right a holder shall have thereafter with respect to any of those particular Rights shall be to receive the number of Common Shares equal to the number of such Rights held by such holder multiplied by the Exchange Ratio. The Company shall promptly give public notice of any such exchange and in addition, the Company shall promptly mail a notice of any such exchange to all of the holders of such Rights in accordance with Section 25 of this Agreement; provided, however, that the failure to give, any delay in giving or any defect in, such notice shall not affect the validity of such exchange. Each such notice of exchange will

state the method by which the exchange of the Common Shares for Rights will be effected and, in the event of any partial exchange, the number of Rights which will be exchanged. The Company shall not be required to issue fractions of Common Shares or to distribute certificates which evidence fractional Common Shares. In lieu of such fractional Common Shares, the Company shall pay to the registered holders of the Rights Certificates with regard to which such fractional Common Shares would otherwise be issuable an amount in cash equal to the product derived by multiplying (x) the subject fraction, by (y) the last sale price of the Common Shares on the fifth Trading Day following the public announcement of the exchange by the Company, or, in case no such sale takes place on such day, the average of the closing bid and asked prices on such day, in either case on a when issued basis (taking into account the exchange), as reported in the principal consolidated transaction reporting system with respect to securities listed or admitted to trading on the NASDAQ (or, if the Common Shares are not so listed or traded, then as determined in the manner provided under the definition of "Current Market Price," adjusted to take into account the exchange). In determining whether any particular holder shall be obligated to receive cash in lieu of a fractional share, the holder shall be entitled to have all Rights beneficially owned by such holder aggregated so that only one fractional share shall be attributable to all the Rights so beneficially owned.

(d) Antidilution Adjustments After the Trigger Date:

(1) In the event the Company shall at any time after the Trigger Date effect any stock split with respect to its Common Stock, then the Purchase Price to be in effect after such stock split shall be determined by multiplying the Purchase Price in effect immediately prior to such action by a fraction, the numerator of which shall be the number of Common Shares outstanding immediately prior to such stock split and the denominator of which shall be the number of Common Shares outstanding immediately after such stock split.

(2) In case the Company shall at any time after the Trigger Date fix a record date for the making of a distribution to holders of Common Stock (including any such distribution made in connection with a reclassification of the Common Stock or a consolidation or merger in which the Company is the surviving corporation) of securities (other than Common Stock and rights, options or warrants referred to in Section 11(d)(3), cash (other than a regular periodic cash dividend at an annual rate not in excess of (x) 125 percent of the annual rate of the regular cash dividend paid on the Common Stock during the immediately preceding fiscal year or (y) in the event that a regular cash dividend was not paid on the Common Stock during such preceding fiscal year, 5 percent of the Current Market Price of the Common Stock on the date such regular cash dividend was first declared), property, evidences of indebtedness or assets, the Purchase Price to be in effect after such record date shall be determined by multiplying the Purchase Price in effect immediately prior to such record date by a fraction, the numerator of which shall be the Current Market Price per share of Common Stock on such record date, less the fair market value (as determined in good faith by a majority of the Board of Directors of the Company, whose determination shall be described in a statement filed with the Rights Agent) of such securities, cash, property, evidences of indebtedness or assets to be so distributed in respect of one share of Common Stock, and the denominator of which shall be such Current Market Price per share of Common Stock on such record date. Such adjustments shall be made

successively whenever such a record date is fixed; and in the event that such distribution is not made following such adjustment, the Purchase Price shall be readjusted to be the Purchase Price which would have been in effect if such record date had not been fixed.

(3) If the Company shall at any time after the Trigger Date fix a record date for the issuance of rights, options or warrants to holders of Common Shares entitling them to subscribe for or purchase Common Shares (or securities convertible into Common Shares) at a price per Common Share (or, in the case of a convertible security, having a conversion price per Common Share) less than the Current Market Price per share of Common Stock on such record date and requiring that the conversion or purchase right be exercised within 45 calendar days after such record date, the Purchase Price to be in effect after such record date shall be determined by multiplying the Purchase Price in effect immediately prior to such record date by a fraction, the numerator of which shall be the number of shares of Common Shares outstanding on such record date, plus the number of Common Shares which the aggregate exercise and/or conversion price for the total number of Common Shares which are obtainable upon exercise and/or conversion of such rights, options, warrants or convertible securities would purchase at such Current Market Price, and the denominator of which shall be the number of shares of Common Shares outstanding on such record date, plus the number of additional Common Shares which may be obtained upon exercise and/or conversion of such rights, options, warrants or convertible securities. In case such subscription price may be paid in a consideration part or all of which shall be in a form other than cash, the value of such consideration shall be as determined in good faith by a majority of the Board of Directors of the Company, whose determination shall be described in a statement filed with the Rights Agent and shall be binding on the Rights Agent. Common Shares owned by or held for the account of the Company or any Subsidiary of the Company shall not be deemed outstanding for the purpose of any such computation. Such adjustment shall be made successively whenever such a record date is fixed; and in the event that such rights, options or warrants are not issued following such adjustment, the Purchase Price shall be readjusted to be the Purchase Price which would have been in effect if such record date had not been fixed.

(4) Anything in this Section 11 to the contrary notwithstanding, the Company shall be entitled to make such reductions in the Purchase Price, in addition to those adjustments expressly required by this Section 11, as and to the extent that it in its sole discretion shall determine to be advisable in order that any combination or subdivision of the Common Stock, issuance wholly for cash of any Common Stock at less than the Current Market Price, issuance wholly for cash of Common Stock or securities which by their terms are convertible into or exchangeable or exercisable for Common Shares, stock dividends or issuance of rights, options or warrants referred to in this Section 11, hereafter made by the Company to holders of its Common Shares, shall not be taxable to such stockholders.

(5) After each adjustment of the Purchase Price pursuant to any of subsections (1) - (4) immediately above, the number of Common Shares purchasable with each Right shall be adjusted to the quotient derived by dividing the Purchase Price as constituted after giving effect to such adjustment into the Exercise Amount.

(6) The Company shall not take any of the actions described in any of subsections (1) - (3) above at a time when any Common Equivalent Shares are outstanding unless the Company shall take substantively identical actions with respect to the outstanding Common Stock and outstanding Common Equivalent Shares. Conversely, the Company shall not take any actions with respect to outstanding Common Equivalent Shares analogous to those described in any of subsections (1) - (3) above unless the Company shall take substantively identical actions with respect to the outstanding Common Stock and outstanding Common Equivalent Shares.

(e) Recapitalizations.

(1) In the event that after the Trigger Date, the Company shall issue any securities in a reclassification of the Common Stock or in any other recapitalization (including any such reclassification in connection with a consolidation or merger in which the Company is the surviving corporation), then in each such event:

(A) the property purchasable with each Right shall be adjusted to be whatever the owner of that Right would have owned by reason of both (i) the exercise of that Right immediately prior to such recapitalization or reclassification and (ii) the effect of that recapitalization or reclassification on the property assumed to have been received in such exercise.

(B) The Exercise Amount shall be allocated among the shares of stock and/or other units of property for which the Right shall be exercisable after giving effect to the adjustment cited in clause (A) based on the fair market value of such property to determine the Purchase Price for each such share and/or unit.

(2) To illustrate the intended operation of this provision, assume that: (i) immediately prior to a reclassification, each Right were exercisable for 10 Common Shares and the Exercise Amount were \$200 (resulting in a purchase price of \$20 per Common Share); (ii) as a result of the Reclassification, each outstanding Common Share is reclassified into two New Common Shares and one Series C Share; and (iii) immediately after the reclassification, the market value of each New Common Share was \$15 and the market value of each Series C share was \$10. Immediately after the assumed reclassification, each Right would be exercisable for 20 New Common Shares at a purchase price of \$7.50 per share and ten Series C Shares at a purchase price of \$5 per share.

(f) In the event a Triggering Event shall occur, or in the event there shall be a recapitalization or reclassification pursuant to Section 11(e), or in the event there shall be any merger or other action which shall cause a change in the property purchasable with the Rights under Section 13, or in the event there shall be any other occurrence or development which shall cause the property purchasable with the Rights to consist in whole or in part of anything other than Preferred Stock, then and in any such event:

(1) The certificates representing the Rights shall automatically be deemed to represent the adjusted terms of the Rights without the need to replace such

certificates. The Company shall thereafter make arrangements for the production of certificates representing the revised terms of the Rights resulting from such adjustment and shall use such certificates to represent Rights for which new certificates shall be issuable by reason of a transfer of record ownership or by reason of a request by the existing record owner for a replacement certificate representing the revised terms of the Rights.

(2) The principles underlying the adjustment provisions in this Section 11 and elsewhere in this Agreement shall be applied to fairly and proportionately adjust the shares or other property purchasable with the Rights and the purchase price for each share or other property unit purchasable with the Rights after giving effect to the adjustments required by reason of such event to reflect any subsequent capital changes or other events. Without limiting by implication the generality of the preceding sentence, the provisions of Sections 7, 9, 10, 12, 13, 14 and 24 of this Agreement which related to the Preferred Stock shall after the occurrence of any such event apply in a substantively identical manner to the shares or other property purchasable with the Rights after giving effect to such event.

(g) Before taking any action that would cause an adjustment reducing the Purchase Price per share at which shares are purchasable with the Rights below the par value of those shares, the Company shall take any corporate action which may, in the opinion of its counsel, be necessary in order that the Company may validly and legally issue fully paid and nonassessable shares at such adjusted Purchase Price.

(h) In any case in which this Section 11 shall require that an adjustment be made effective as of a record date for a specified event, the Company may elect to defer until the occurrence of such event the issuance to the holder of any Right exercised after such record date the shares of Common Stock and other securities, cash or property of the Company, if any, issuable upon such exercise over and above the shares of Common Stock and other securities, cash or property of the Company, if any, issuable upon such exercise on the basis of the Purchase Price in effect prior to such adjustment; provided, however, that the Company shall deliver to such holder a due bill or other appropriate instrument evidencing such holder's right to receive such additional shares (fractional or otherwise) or other securities, cash or property upon the occurrence of the event requiring such adjustment.

(i) The Company covenants and agrees that on and after the Trigger Date neither it nor any combination of it and its subsidiaries shall (i) consolidate with any other Person, or (ii) merge with or into any other Person or (iii) directly or indirectly sell, lease, or otherwise transfer or dispose of (in one transaction or a series of related transactions) assets or earning power aggregating more than 50 percent of the assets or earning power of the Company and its Subsidiaries taken as a whole to any other Person if (A) at the time of or immediately after such consolidation, merger, sale, lease, transfer, or disposition there are any rights, warrants, securities or other instruments outstanding or agreements in effect which would substantially diminish or otherwise eliminate the benefits intended to be afforded by the Rights, (B) prior to, simultaneously with or immediately after such consolidation, merger, sale, lease, transfer, or disposition the stockholders (or equity holders) of the Person who constitutes, or would constitute, the Principal Party in such transaction shall have received a distribution of Rights previously owned by such Person or any of its Affiliates or Associates or (C) the form or nature

of organization of the Principal Party would preclude or limit the exercisability of the Rights. The Company shall not consummate any such consolidation, merger, sale, lease, transfer, or disposition unless prior thereto the Company and such other Person shall have executed and delivered to the Rights Agent a supplemental agreement evidencing compliance with this Section 11(i).

(j) The Company covenants and agrees that, after the Trigger Date it will not, except as permitted by Section 11(c)(3) of this Agreement, take (or permit any Subsidiary to take) any action if at the time such action is taken it is reasonably foreseeable that such action will, directly or indirectly, diminish or otherwise eliminate the benefits intended to be afforded by the Rights.

Section 12. Certification of Adjustments. Whenever an adjustment is made as provided in Sections 11 and 13, the Company shall (a) promptly prepare a certificate setting forth such adjustment and a brief statement of the facts accounting for such adjustment, (b) promptly file with the Rights Agent and with each transfer agent for the stock then purchasable with the Rights a copy of such certificate and (c) mail a brief summary thereof to each holder of a Rights Certificate (or, if no Rights Certificates have been issued, to each holder of a certificate representing shares of Common Stock) in accordance with Section 25. Notwithstanding the foregoing sentence, the failure of the Company to give such notice shall not affect the validity of or the force or effect of or the requirement for such adjustment. Any adjustment to be made pursuant to Sections 11 and 13 of this Agreement shall be effective as of the date of the event giving rise to such adjustment. The Rights Agent shall be fully protected in relying on any such certificate and on any adjustment therein contained and shall not be obligated or responsible for calculating any adjustment nor shall it be deemed to have knowledge of such adjustment unless and until it shall have received such certificate.

Section 13. Consolidation, Merger or Sale or Transfer of Assets or Earning Power.

(a) A "Business Combination" shall be deemed to occur in the event that, in or following a Triggering Event, (i) the Company shall, directly or indirectly, consolidate with, or merge with and into, any other Person (other than a Subsidiary of the Company in a transaction that complies with Section 11(i) and Section 11(j) of this Agreement) in a transaction in which the Company is not the continuing, resulting or surviving corporation of such merger or consolidation, (ii) any Person (other than a Subsidiary of the Company in a transaction that complies with Section 11(i) and Section 11(j) of this Agreement) shall, directly or indirectly, consolidate with the Company, or shall merge with and into the Company, in a transaction in which the Company is the continuing, resulting or surviving corporation of such merger or consolidation and, in connection with such merger or consolidation, all or part of the Common Stock shall be changed (including, without limitation, any conversion into or exchange for securities of the Company or of any other Person, cash or any other property), (iii) the Company shall, directly or indirectly, effect a share exchange in which all or part of the Common Stock shall be changed (including, without limitation, any conversion into or exchange for securities of any other Person, cash or any other property) or (iv) the Company shall, directly or indirectly, sell, lease, exchange, mortgage, pledge or otherwise transfer or dispose of (or one or more of its Subsidiaries shall directly or indirectly sell, lease, exchange, mortgage, pledge or otherwise transfer or dispose of), in one transaction or a series of related transactions, assets or earning

power aggregating more than 50 percent of the assets or earning power of the Company and its Subsidiaries (taken as a whole) to any other Person (other than the Company or any of its Subsidiaries in one or more transactions each and all of which comply with Section 11(i) and Section 11(j) of this Agreement).

In the event of a Business Combination, proper provision shall be made so that each holder of a Right (except as otherwise provided in this Agreement) shall thereafter have the right to receive, upon the exercise of each Right, such number of shares of Common Stock of the Principal Party as shall be equal to the result obtained by dividing the Exercise Amount in effect prior to the Business Combination by 50 percent of the Current Market Price per share of the Common Stock of such Principal Party immediately prior to the consummation of such Business Combination. All shares of Common Stock of any Person for which any Right may be exercised after consummation of a Business Combination as provided in this Section 13(a) shall, when issued upon exercise thereof in accordance with this Agreement, be duly and validly authorized and issued, fully paid, nonassessable, freely tradable, not subject to liens or encumbrances, and free of preemptive rights, rights of first refusal or any other restrictions or limitations on the transfer or ownership thereof of any kind or nature whatsoever. The Purchase Price per share for such Common Stock immediately after such Business Combination shall be equal to 50 percent of the Current Market Price per share of the Common Stock of such Principal Party immediately prior to the consummation of such Business Combination.

(b) After consummation of any Business Combination, (i) the Principal Party shall be liable for, and shall assume, by virtue of such Business Combination and without the necessity of any further act, all the obligations and duties of the Company pursuant to this Agreement, (ii) the term "Company" as used in this Agreement shall thereafter be deemed to refer to such Principal Party and (iii) such Principal Party shall take all steps (including, but not limited to, the reservation of a sufficient number of shares of its Common Stock in accordance with Section 9) in connection with such Business Combination as necessary to ensure that the provisions of this Agreement shall thereafter be applicable, as nearly as reasonably may be, in relation to the shares of its Common Stock thereafter deliverable upon the exercise of the Rights.

(c) The Company shall not consummate any Business Combination unless prior thereto (i) the Principal Party shall have a sufficient number of authorized shares of its Common Stock which have not been issued or reserved for issuance (other than shares reserved for issuance pursuant to this Agreement to the holders of Rights) to permit the exercise in full of the Rights in accordance with this Section 13, (ii) the Company and such Principal Party shall have executed and delivered to the Rights Agent a supplemental agreement providing for the fulfillment of the Principal Party's obligations and the terms as set forth in paragraphs (a) and (b) of this Section 13 and further providing that, as soon as practicable on or after the date of such Business Combination, the Principal Party, at its own expense, shall (A) prepare and file, if necessary, a registration statement on an appropriate form under the Securities Act with respect to the Rights and the securities purchasable upon exercise of the Rights, (B) use its best efforts to cause such registration statement to become effective as soon as practicable after such filing and remain effective (with a prospectus at all times meeting the requirements of the Securities Act) until the Expiration Date, (C) deliver to holders of the Rights historical financial statements for the Principal Party and each of its Affiliates which comply in all respects with the requirements

for registration on Form 10 (or any successor form) under the Exchange Act, (D) use its best efforts to qualify or register the Rights and the securities purchasable upon exercise of the Rights under the state securities or "blue sky" laws of such jurisdictions as may be necessary or appropriate, (E) use its best efforts to list the Rights and the securities purchasable upon exercise of the Rights on a United States national securities exchange and (F) obtain waivers of any rights of first refusal or preemptive rights in respect of the Common Stock of the Principal Party subject to purchase upon exercise of outstanding Rights, (iii) the Company and the Principal Party shall have furnished to the Rights Agent an opinion of independent counsel stating that such supplemental agreement is a legal, valid and binding agreement of the Principal Party enforceable against the Principal Party in accordance with its terms, and (iv) the Company and the Principal Party shall have filed with the Rights Agent a certificate of a nationally recognized firm of independent accountants setting forth the number of shares of Common Stock of such issuer which may be purchased upon the exercise of each Right after the consummation of such Business Combination.

(d) The provisions of this Section 13 shall similarly apply to successive Business Combinations. In the event a Business Combination shall be consummated at any time after the occurrence of a Triggering Event, the Rights which have not theretofore been exercised shall thereafter be exercisable for the consideration and in the manner described in Section 13(a). The provisions of Section 11(b) of this Agreement shall be applicable to events which occur after a Business Combination.

(e) Notwithstanding any other provision of this Agreement, no adjustment to the number or kind of shares (or fractions of a share), cash or other property for which a Right is exercisable or the number of Rights outstanding or associated with each share of Common Stock or any similar or other adjustment shall be made or be effective if such adjustment would have the effect of reducing or limiting the benefits the holders of the Rights would have had absent such adjustment, including, without limitation, the benefits under Sections 11 and 13, unless the terms of this Agreement are amended so as to preserve such benefits, provided that this paragraph shall not prevent any change prior to the Trigger Date permitted by Section 26(a) and provided that this Section 13(e) shall not be deemed to limit or impair the right to engage in an exchange pursuant to Section 11(c)(2).

(f) The Company covenants and agrees that it shall not effect any Business Combination if at the time of, or immediately after such Business Combination, there are any rights, options, warrants or other instruments outstanding which would diminish or otherwise eliminate the benefits intended to be afforded by the Rights.

(g) Without limiting the generality of this Section 13, in the event the nature of the organization of any Principal Party shall preclude or limit the acquisition of Common Stock of such Principal Party upon exercise of the Rights as required by Section 13(a) as a result of a Business Combination, it shall be a condition to such Business Combination that such Principal Party shall take such steps (including, but not limited to, a reorganization) as may be necessary to ensure that the benefits intended to be derived under this Section 13 upon the exercise of the Rights are assured to the holders thereof.

Section 14. Fractional Rights and Fractional Shares.

(a) The Company shall not be required to issue fractional Rights or to distribute Rights Certificates which evidence fractional Rights.

(b) The Company shall permit the issuance and trading of Preferred Stock in fractional shares such that the smallest fractional share tradable at any particular time shall equal the reciprocal of the Adjustment Number in effect at that particular time. The Company shall not be required to issue fractions of shares of Preferred Stock (other than fractions which are integral multiples of the reciprocal of the Adjustment Number) upon exercise of the Rights or to distribute certificates which evidence fractional shares of Preferred Stock (other than fractions which are integral multiples of the reciprocal of the Adjustment Number). Fractions of shares of Preferred Stock may, at the election of the Company, be evidenced by depositary receipts, pursuant to an appropriate agreement between the Company and a depositary selected by it, provided that such agreement shall provide that the holders of such depositary receipts shall have all the rights, privileges and preferences to which they are entitled as beneficial owners of the Preferred Stock. In lieu of fractional shares of Preferred Stock that are not integral multiples of the reciprocal of the Adjustment Number, the Company may at its option (i) issue scrip or warrants in registered form (either represented by a certificate or uncertificated) or in bearer form (represented by a certificate) which shall entitle the holder to receive the reciprocal of the Adjustment Number of one share of Preferred Stock upon the surrender of such scrip or warrants aggregating the reciprocal of the Adjustment Number of one share of Preferred Stock, or (ii) pay to the registered holders of Rights Certificates at the time such Rights Certificates are exercised as provided in this Agreement an amount in cash equal to the same fraction of the relevant closing price of a share of Preferred Stock. For purposes of this Section 14(b), the relevant closing price of a share of Preferred Stock shall be the closing price of a share of Preferred Stock (as determined pursuant to the second sentence of the definition of "Current Market Price" in Section 1) for the Trading Day immediately prior to the date of such exercise.

(c) The Company shall not be required to issue fractions of shares of Common Stock or Common Equivalent Shares or to distribute certificates which evidence fractional shares of Common Stock. In lieu of such fractional shares of Common Stock, the Company shall pay to the registered holders of the Rights Certificates with regard to which such fractional shares of Common Stock would otherwise be issuable an amount in cash equal to the product derived by multiplying (x) the subject fraction, by (y) the closing price of a share of Common Stock (as determined pursuant to the second sentence of the definition of "Current Market Price" in Section 1) for the Trading Day immediately prior to the date of such exercise.

(d) The holder of a Right by his acceptance thereof expressly waives any right to receive any fractional Rights or any fractional shares upon exercise of a Right (except as otherwise provided in this Agreement).

Section 15. Rights of Action. Except as otherwise provided, all rights of action in respect of this Agreement are vested in the respective registered holders of the Rights Certificates (and, prior to the Distribution Date, any registered holders of associated Common Stock); and any registered holder of any Rights Certificate (or, prior to the Distribution Date, any

share of associated Common Stock), without the consent of the Rights Agent or of the holder of any other Right, may, on his own behalf and for his own benefit, enforce, and may institute and maintain any suit, action or proceeding against the Company to enforce, or otherwise act in respect of, his rights pursuant to this Agreement. Without limiting the foregoing or any remedies available to the holders of Rights, it is specifically acknowledged that the holders of Rights would not have an adequate remedy at law for any breach of this Agreement and will be entitled to specific performance of the obligations under, and injunctive relief against actual or threatened violations of the obligations of any Person subject to, this Agreement.

Section 16. Agreement of Rights Holders Concerning Transfer and Ownership of Rights. Every holder of a Right by accepting the same consents and agrees with the Company and the Rights Agent and with every other holder of a Right that:

(a) prior to the Distribution Date, the Rights will be transferable only in connection with the transfer of Common Stock;

(b) after the Distribution Date, the Rights Certificates will be transferable on the registry books of the Rights Agent only if surrendered at the principal stock transfer office of the Rights Agent, duly endorsed or accompanied by a proper instrument of transfer;

(c) the Company and the Rights Agent may deem and treat the Person in whose name a Rights Certificate (or, prior to the Distribution Date, the associated Common Stock certificate) is registered as the absolute owner thereof and of the Rights evidenced thereby (notwithstanding any notations of ownership or writing on the Rights Certificate or the associated Common Stock certificate made by anyone other than the Company, the transfer agent for the stock purchasable with such Right or the Rights Agent) for all purposes whatsoever, and neither the Company nor the Rights Agent shall be affected by any notice to the contrary;

(d) notwithstanding anything to the contrary in this Agreement, neither the Company nor the Rights Agent will have any liability to any holder of a Right (or a beneficial interest in a Right) or other Person as a result of the inability of the Company or the Rights Agent to perform any of their respective obligations pursuant to this Agreement by reason of any preliminary or permanent injunction or other order, judgment, decree or ruling (whether interlocutory or final) issued by a court of competent jurisdiction or by a governmental, regulatory, self-regulatory or administrative agency or commission, or any statute, rule, regulation or executive order promulgated or enacted by any governmental authority, prohibiting or otherwise restraining performance of such obligation; *provided, however*, that the Company will use all reasonable efforts to have any such injunction, order, judgment, decree or ruling lifted or otherwise overturned as promptly as practicable; and

(e) Rights that are Beneficially Owned by certain Persons will, under the circumstances set forth in Section 7(e), become null and void.

Section 17. Rights Holder Not Deemed a Stockholder. No holder, as such, of any Rights Certificate shall be entitled to vote or to receive dividends or distributions or shall be deemed for any purpose the holder of Preferred Stock or any other securities, cash or other

property which may at any time be issuable on the exercise of the Rights represented thereby, nor shall anything contained in this Agreement or in any Rights Certificate be construed to confer upon the holder of any Rights Certificate, as such, any of the rights of a stockholder of the Company, including, without limitation, any right (i) to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, (ii) to give or withhold consent to any corporate action, (iii) to receive notice of meetings or other actions affecting stockholders (except as provided in Section 24), (iv) to receive dividends, distributions or subscription rights, (v) to institute, as a holder of Preferred Stock or other securities issuable on exercise of the Rights represented by any Rights Certificate, any derivative action on behalf of the Company, or otherwise, until and only to the extent that the Right or Rights evidenced by such Rights Certificate shall have been exercised in accordance with the provisions of this Agreement.

Section 18. Concerning the Rights Agent. The Company agrees to pay to the Rights Agent reasonable compensation for all services rendered by it hereunder and, from time to time, on demand of the Rights Agent, its reasonable expenses and counsel fees and other disbursements incurred in the administration and execution of this Agreement and the exercise and performance of its duties hereunder. The Company also agrees to indemnify the Rights Agent for, and to hold it harmless against, any loss, liability or expense, incurred without negligence, bad faith, willful misconduct or breach of this Agreement on the part of the Rights Agent, for anything done or omitted by the Rights Agent in connection with the acceptance and administration of this Agreement, including the costs and expenses of defending against any claim of liability in the premises. The costs and expenses of enforcing this right of indemnification shall also be paid by the Company. The indemnification provided for hereunder shall survive the expiration of the Rights and the termination of this Agreement.

The Rights Agent may conclusively rely upon and shall be protected and shall incur no liability for or in respect of any action taken, suffered or omitted by it in connection with its administration of this Agreement in reliance upon any Rights Certificate or certificate for Preferred Stock or Common Stock or for other securities of the Company, instrument of assignment or transfer, power of attorney, endorsement, affidavit, letter, notice, direction, consent, certificate, statement or other paper or document reasonably believed by it to be genuine and to be signed, executed and, when necessary, verified or acknowledged, by the proper Person or Persons.

Notwithstanding anything in this Agreement to the contrary, in no event shall the Rights Agent be liable for special, indirect or consequential loss or damage of any kind whatsoever (including but not limited to lost profits), even if the Rights Agent has been advised of the likelihood of such loss or damage and regardless of the form of the action.

Section 19. Merger or Consolidation or Change of Name of Rights Agent. Any corporation into which the Rights Agent or any successor Rights Agent may be merged or with which it may be consolidated, or any corporation resulting from any merger or consolidation to which the Rights Agent or any successor Rights Agent shall be a party, or any corporation succeeding to the corporate trust or stock transfer business of the Rights Agent or any successor Rights Agent, shall be the successor to the Rights Agent under this Agreement without the execution or filing of any document or any further act on the part of any of the parties hereto,

provided that such corporation would be eligible for appointment as a successor Rights Agent under the provisions of Section 21. The purchase of all or substantially all of the Rights Agent's assets employed in the performance of this Agreement will be deemed to be a merger or consolidation for purposes of this Section 19. In case at the time such successor Rights Agent shall succeed to the agency created by this Agreement any of the Rights Certificates shall have been countersigned but not delivered, any such successor Rights Agent may adopt the countersignature of the predecessor Rights Agent and deliver such Rights Certificate so countersigned; and in case at that time any of the Rights Certificates shall not have been countersigned, any successor Rights Agent may countersign such Rights Certificate either in the name of the predecessor Rights Agent or in the name of the successor Rights Agent; and in all such cases such Rights Certificates shall have the full force provided in the Rights Certificates and in this Agreement.

In case at any time the name of the Rights Agent shall be changed and at such time any of the Rights Certificates shall have been countersigned but not delivered, the Rights Agent may adopt the countersignature under its prior name and deliver Rights Certificates so countersigned; and in case at that time any of the Rights Certificates shall not have been countersigned, the Rights Agent may countersign such Rights Certificates either in its prior name or in its changed name; and in all such cases such Rights Certificates shall have the full force provided in the Rights Certificates and in this Agreement.

Section 20. Duties of Rights Agent. The Rights Agent undertakes the duties and obligations imposed by this Agreement (and no implied duties or obligations shall be read into this Agreement against the Rights Agent) upon the following terms and conditions, by all of which the Company and the holders of Rights Certificates, by their acceptance thereof, shall be bound:

(a) Before the Rights Agent acts or refrains from acting, the Rights Agent may consult with legal counsel (who may be legal counsel for the Company), and the opinion of such counsel shall be full and complete authorization and protection to the Rights Agent as to any action taken or omitted by it in good faith and in accordance with such opinion.

(b) Whenever in the performance of its duties under this Agreement the Rights Agent shall deem it necessary or desirable that any fact or matter (including, without limitation, the identity of any Acquiring Person or any Affiliate or Associate of an Acquiring Person or the determination of Current Market Price) be proved or established by the Company prior to taking or suffering any action hereunder, such fact or matter (unless other evidence in respect thereof be specifically prescribed in this Agreement) may be deemed to be conclusively proved and established by a certificate signed by the Chairman, the Chief Executive Officer, the President, the Chief Financial Officer, the Treasurer, any Vice President or the Secretary of the Company and delivered to the Rights Agent; and such certificate shall be full authorization to the Rights Agent for any action taken or suffered in good faith by it under the provisions of this Agreement in reliance upon such certificate.

(c) The Rights Agent shall be liable hereunder only for the negligence, bad faith, willful misconduct or breach of this Agreement by it or its directors, officers, employees, Affiliates, agents, advisors and representatives.

(d) The Rights Agent shall not be liable for or by reason of any of the statements of fact or recitals contained in this Agreement or in the Rights Certificates (except its countersignature thereof) or be required to verify the same, but all such statements and recitals are and shall be deemed to have been made by the Company only.

(e) The Rights Agent shall not be under any responsibility in respect of the validity of this Agreement or the execution and delivery of this Agreement (except the due execution and delivery of this Agreement by the Rights Agent) or in respect of the validity or execution of any Rights Certificate (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Agreement or in any Rights Certificate; nor shall it be responsible for any change or adjustment in the terms of the Rights (including the manner, method or amount thereof) provided for in Sections 3, 11, 13 or 23 or the ascertaining of the existence of facts that would require any such change or adjustment (except with respect to the exercise of Rights evidenced by Rights Certificates after actual notice of any change or adjustment is required); nor shall it by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of any shares of Preferred Stock, Common Stock or other securities to be issued pursuant to this Agreement or any Rights Certificate or as to whether any shares of Preferred Stock, Common Stock or other securities will, when issued, be validly authorized and issued, fully paid and nonassessable.

(f) The Company agrees that it will perform, execute, acknowledge and deliver or cause to be performed, executed, acknowledged and delivered all such further and other acts, instruments and assurances as may reasonably be required by the Rights Agent for the carrying out or performance by the Rights Agent of the provisions of this Agreement.

(g) The Rights Agent is hereby authorized and directed to accept instructions with respect to the performance of its duties hereunder from the Chief Executive Officer, the President, the Chief Financial Officer, the Treasurer, any Vice President or the Secretary of the Company, and to apply to such officers for advice or instructions in connection with its duties, and it shall not be liable for any action taken or suffered to be taken by it in good faith in accordance with instructions of any such officer. Any application by the Rights Agent for written instructions from the Company may, at the option of the Rights Agent, set forth in writing any action proposed to be taken or omitted by the Rights Agent under this Agreement and the date on or after which such action shall be taken or such omission shall be effective. The Rights Agent shall not be liable for any action taken by, or omission of, the Rights Agent in accordance with a proposal included in any such application on or after the date specified in such application (which date shall not be less than ten Business Days after the date any officer of the Company actually receives such application, unless any such officer shall have consented in writing to an earlier date) unless, prior to taking any such action (or the effective date in the case of an omission), the Rights Agent shall have received written instructions in response to such application subject to the proposed action or omission and/or specifying the action to be taken or omitted.

(h) The Rights Agent and any stockholder, director, officer or employee of the Rights Agent may buy, sell or deal in any of the Rights or other securities of the Company or become pecuniarily interested in any transaction in which the Company may be interested, or contract with or lend money to the Company or otherwise act as fully and freely as though the Rights Agent were not serving as such under this Agreement. Nothing in this Agreement shall preclude the Rights Agent from acting in any other capacity for the Company or for any other legal entity.

(i) The Rights Agent may execute and exercise any of the rights or powers hereby vested in it or perform any duty hereunder either itself or by or through its attorneys or agents.

(j) If, with respect to any Rights Certificate surrendered to the Rights Agent for exercise or transfer, the certificate attached to the form of assignment or form of election to purchase, as the case may be, has either not been completed or indicates an affirmative response to clause 1 and/or 2 thereof, the Rights Agent shall not take any further action with respect to such requested exercise or transfer without first consulting with the Company.

(k) No provision of this Agreement shall require the Rights Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder or in the exercise of its rights if there shall be reasonable grounds for believing that repayment of such funds or adequate indemnification against such risk or liability is not reasonably assured to it.

(l) The Rights Agent shall not be required to take notice or be deemed to have notice of any fact, event or determination (including, without limitation, any dates or events defined in this Agreement or the designation of any Person as an Acquiring Person, Affiliate or Associate) under this Agreement unless and until the Rights Agent shall be specifically notified in writing by the Company of such fact, event or determination.

(m) From time to time after the Distribution Date, upon the written request of the Company, the Rights Agent will promptly deliver to the Company a list, as of the most recent practicable date (or as of such earlier date as may be specified by the Company), of the record holders of Rights and Rights Certificates.

Section 21. Change of Rights Agent. The Rights Agent or any successor Rights Agent may resign and be discharged from its duties under this Agreement upon notice of 30 days in writing mailed to the Company and to each transfer agent of the Common Stock or Preferred Stock by registered or certified mail and, at the expense of the Company, to the holders of the Rights Certificates by either (i) first-class mail or (ii) by disclosure in a periodic report of the Company required to be filed under the Exchange Act, any permitted report under the Exchange Act, a press release of the Company or in any proxy or other communication of the Company with its stockholders. The Company may remove the Rights Agent or any successor Rights Agent upon notice of 30 days in writing, mailed to the Rights Agent or successor Rights Agent, as the case may be, and to each transfer agent of the Common Stock or Preferred Stock by registered or certified mail, and to the holders of the Rights Certificates by either (i) first-class

mail or (ii) by disclosure in a periodic report of the Company required to be filed under the Exchange Act, any permitted report under the Exchange Act, a press release of the Company or in any proxy or other communication of the Company with its stockholders. If the Rights Agent shall resign or be removed or shall otherwise become incapable of acting, the Company shall appoint a successor to the Rights Agent. Notwithstanding any other provision of this Agreement, in no event shall the resignation or removal of a Rights Agent be effective until a successor Rights Agent shall have been appointed and have accepted such appointment. If the Company shall fail to make such appointment within a period of 30 days after such removal or after it has been notified in writing of such resignation or incapacity by the resigning or incapacitated Rights Agent or by any holder of a Rights Certificate (who shall, with such notice, submit his Rights Certificate for inspection by the Company), then the incumbent Rights Agent or the registered holder of any Rights Certificate may apply to any court of competent jurisdiction for the appointment of a new Rights Agent. Any successor Rights Agent, whether appointed by the Company or by such a court, shall be (i) a corporation organized and doing business under the laws of the United States or of the State of Maryland (or of any other state of the United States so long as such corporation is authorized to conduct a banking, corporate trust or stock transfer business) in good standing, which is authorized under such laws to exercise corporate trust or stock transfer powers and is subject to supervision or examination by federal or state authority and which has at the time of its appointment as Rights Agent a combined capital and surplus of at least \$25,000,000 or (ii) a subsidiary of a corporation described in clause (i) of this sentence. After appointment, the successor Rights Agent shall be vested with the same powers, rights, duties and responsibilities as if it had been originally named as Rights Agent without further act or deed; but the predecessor Rights Agent shall deliver and transfer to the successor Rights Agent any property at the time held by it hereunder, and execute and deliver any further assurance, conveyance, act or deed necessary for such purpose. Not later than the effective date of any such appointment, the Company shall file notice thereof in writing with the predecessor Rights Agent and each transfer agent of the Common Stock or Preferred Stock; the Company shall also either (i) mail a notice thereof in writing to the registered holders of the Rights Certificates or (ii) make a disclosure with respect thereto in a periodic report of the Company required to be filed under the Exchange Act, any permitted report under the Exchange Act, a press release of the Company or in any proxy or other communication of the Company with its stockholders. Failure to give any notice provided for in this Section 21, however, or any defect therein, shall not affect the legality or validity of the resignation or removal of the Rights Agent or the appointment of the successor Rights Agent, as the case may be.

Section 22. Issuance of New Rights Certificates. Notwithstanding any of the provisions of this Agreement or of the Rights Certificates to the contrary, the Company may, at its option, issue new Rights Certificates evidencing Rights in such form as may be approved by a majority of the Board of Directors of the Company to reflect any adjustment or change in the Purchase Price per share and the number or kind or class of securities, cash or other property purchasable under the Rights Certificates made in accordance with the provisions of this Agreement.

Section 23. Redemption and Termination.

(a) The Board of Directors of the Company may, at its option, at any time prior to the earlier of (i) the Trigger Date and (ii) the Expiration Date, redeem all but not less than all of the then-outstanding Rights at a redemption price of \$.001 per Right (the "Redemption Price") appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date of this Agreement. The Company may, at its option, pay the Redemption Price in cash, shares (including fractional shares) of Common Stock (based on the Current Market Price of the Common Stock at the time of redemption) or any other form of consideration deemed appropriate by the Board of Directors. The redemption of the Rights by the Board of Directors of the Company may be made effective at such time, on such basis and with such conditions as the Board of Directors of the Company in its sole discretion may establish.

(b) At the time and date of effectiveness set forth in any resolution of the Board of Directors of the Company ordering the redemption of the Rights, without any further action and without any further notice, the right to exercise the Rights will terminate and the only right thereafter of the holders of Rights shall be to receive the Redemption Price; provided, however, that such resolution of the Board of Directors of the Company may be revoked, rescinded or otherwise modified at any time prior to the time and date of effectiveness set forth in such resolution, in which event the right to exercise will not terminate at the time and date originally set for such termination by the Board of Directors of the Company. The Company shall promptly give public notice of any such redemption; provided, however, that the failure to give, or any defect in, any such notice shall not affect the validity of such redemption. The Company shall also give notice of such redemption to the Rights Agent. The Company may elect to give notice of such redemption to the holders of the then-outstanding Rights by mailing such notice to all such holders at their last addresses as they appear upon the registry books of the Rights Agent or, prior to the issuance of Rights Certificates, on the registry books of the transfer agent for the Common Stock. Any notice which is mailed in the manner provided in this Agreement shall be deemed given, whether or not the holder receives the notice. In connection with any redemption permitted under this Section 23, the Company may, at its option, discharge all of its obligations with respect to the Rights by (i) issuing a press release announcing the manner of redemption of the Rights and (ii) mailing payment of the Redemption Price to the registered holders of the Rights at their last addresses as they appear on the registry books of the Rights Agent or, prior to the issuance of the Rights Certificates, on the registry books of the transfer agent for the Common Stock, and upon such action, all outstanding Rights Certificates shall be null and void without any further action by the Company. Neither the Company nor any of its Affiliates or Associates may redeem, acquire or purchase for value any Rights at any time in any manner other than that specifically set forth in this Section 23, and other than in connection with the purchase of shares of Common Stock prior to the earlier of the Trigger Date and the Expiration Date.

Section 24. Notice of Certain Events. In case the Company, on or after the Distribution Date, shall propose to (a) pay any dividend payable in stock of any class to the holders of its Common Shares or to make any other distribution to the holders of its Common Shares (other than a regular periodic cash dividend at an annual rate not in excess of 125 percent of the annualized rate of the cash dividend paid on the Common Shares during the immediately preceding fiscal year), or (b) offer to the holders of its Common Shares rights, options or warrants to subscribe for or to purchase any additional shares of Common Shares or shares of

stock of any class or any other securities, rights or options, or (c) effect any reclassification of the Common Shares (other than a reclassification involving only the subdivision of outstanding shares of Common Shares, a change in the par value of such Common Shares or a change from par value to no par value), or (d) directly or indirectly effect any consolidation or merger into or with, or effect any sale, lease, exchange, or other transfer or disposition (or to permit one or more of its Subsidiaries to effect any sale, lease, exchange or other transfer or disposition), in one transaction or a series of related transactions, of more than 50 percent of the assets or earning power of the Company and its Subsidiaries (taken as a whole) to, any other Person, or (e) effect the liquidation, dissolution or winding up of the Company, then, in each such case, the Company shall give to each holder of a Right, in accordance with Section 25, a notice of such proposed action, which shall specify any record date for the purposes of such stock dividend or distribution of rights, or the date on which such reclassification, consolidation, merger, sale, lease, exchange, transfer, disposition, liquidation, dissolution or winding up is to take place and if such holders will or may participate therein, the date of participation therein by the holders of Common Shares, if any such date is to be fixed, and such notice shall be so given in the case of any action covered by clause (a) or (b) above at least 20 days prior to the record date for determining holders of the Common Shares for purposes of such action, and in the case of any such other action, at least 20 days prior to the date of the taking of such proposed action or the date of participation therein, if any, by the holders of Common Shares, whichever shall be the earlier. The failure to give notice as required by this Section 24 or any defect therein shall not affect the legality or validity of the action taken by the Company or the vote upon any such action.

In case any Triggering Event or Business Combination shall occur, then, in any such case, the Company shall as soon as practicable thereafter give to each holder of a Rights Certificate, in accordance with Section 25, notice of the occurrence of such Triggering Event or Business Combination, which shall specify the Triggering Event or Business Combination and include a description of the consequences of such event to holders of Rights under Section 11 or 13.

Section 25. Notices. Notices or demands authorized by this Agreement to be given or made by the Rights Agent or by the holder of any Rights Certificate to or on the Company shall be sufficiently given or made if sent by first-class mail, postage prepaid, addressed (until another address is filed in writing with the Rights Agent) as follows:

Spherix Incorporated  
12051 Indian Creek Court  
Beltsville, Maryland 20705  
Attention: Chairman of the Board

Subject to the provisions of Section 21, any notice or demand authorized by this Agreement to be given or made by the Company or by the holder of any Rights Certificate to or on the Rights Agent shall be sufficiently given or made if sent by registered or certified mail and shall be deemed given upon receipt and addressed (until another address is filed in writing with the Company) as follows:

Equity Stock Transfer, LLC

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notices or demands authorized by this Agreement to be given or made by the Company or the Rights Agent to the holder of any Rights Certificate shall be sufficiently given or made if sent by first-class mail, postage prepaid, addressed to such holder at the address of such holder as shown on the registry books of the Company (or, if no Rights Certificates have been issued, if sent by first-class mail, postage prepaid, addressed to each holder of a certificate representing shares of Common Stock at the address of such holder as shown on the Company's Common Stock registry books).

Section 26. Supplements and Amendments.

(a) At any time prior to the Trigger Date, a majority of the Board of Directors of the Company may, and the Rights Agent shall, if so directed, supplement or amend any provision of this Agreement (including, without limitation, (i) the Beneficial Ownership percent as set forth in Section 1 at which a Person becomes an Acquiring Person, (ii) the definition of Exempt Person as set forth in Section 1 to include any Person in addition to the Persons described therein, and (iii) to the extent permitted by applicable law, the number, designation, preferences and rights of shares of the Preferred Stock as set forth in Exhibit A) without the approval of any holders of Rights.

(b) Except as otherwise provided in Section 26(c):

(1) The Board of Directors of the Company shall have the exclusive power and authority to administer this Agreement and to exercise all rights and powers specifically granted to the Board of Directors or the Company, or as may be necessary or advisable in the administration of this Agreement, including, without limitation, the right and power to (i) interpret the provisions of this Agreement and (ii) make all determinations deemed necessary or advisable for the administration of this Agreement (including a determination to redeem or not redeem the Rights, to exchange or not exchange the Rights for Common Stock, or to amend or supplement this Agreement).

(2) All such actions, calculations, interpretations and determinations (including, for purposes of clause (y) below, all omissions with respect to the foregoing) which are done or made by the Board of Directors of the Company in good faith shall (x) be final, conclusive and binding on the Company, the Rights Agent, the holders of the Rights and all other Persons and (y) not subject the Board of Directors of the Company to any liability to the holders of the Rights.

(c) From and after the Trigger Date:

(1) No amendment or other change shall be made in this Agreement or the terms of the Rights (including the number, designation, preferences and rights of shares of the Preferred Stock as set forth in Exhibit A) which would have an effect prohibited by Section

11(j) or Section 13(f) or which would otherwise adversely affect the interests of the holders of Rights Certificates (other than an Acquiring Person or any other Person in whose hands the Rights are void under the provisions of Section 7(e)). Notwithstanding the foregoing, a majority of the Board of Directors may, and the Rights Agent shall, if so directed, amend this Agreement prior to the Trigger Date effective upon the Trigger Date.

(2) The Board of Directors of the Company shall not be entitled to exercise the powers specified in Section 26(b) after the Trigger Date unless the Board of Directors can establish by clear and convincing evidence that its action satisfies the requirement in Section 26(c)(1).

(d) Notwithstanding anything in this Agreement to the contrary, no supplement or amendment that changes the rights and duties of the Rights Agent under this Agreement will be effective against the Rights Agent without the execution of such supplement or amendment by the Rights Agent.

Section 27. Successors. All the covenants and provisions of this Agreement by or for the benefit of the Company or the Rights Agent shall bind and inure to the benefit of their respective successors and assigns hereunder.

Section 28. Benefits of this Agreement. Nothing in this Agreement shall be construed to give to any Person other than the Company, the Rights Agent and the registered holders of Rights any legal or equitable right, remedy or claim under this Agreement; and this Agreement shall be for the sole and exclusive benefit of the Company, the Rights Agent and the registered holders of the Rights.

Section 29. Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be valid and enforceable under applicable law, but if any provision of this Agreement shall be held to be prohibited by or unenforceable under applicable law, (i) such provision shall be applied to accomplish the objectives of the provision as originally written to the fullest extent permitted by law and (ii) all other provisions of this Agreement shall remain in full force and effect. No rule of strict construction, rule resolving ambiguities against the person who drafted the provision giving rise to such ambiguities, or other such rule of interpretation shall be applied against any party with respect to this Agreement.

Section 30. Governing Law. This Agreement and each Rights Certificate issued hereunder shall be deemed to be a contract made under the laws of the State of Delaware and for all purposes shall be governed by and construed in accordance with the internal laws of Delaware applicable to contracts to be made and performed entirely within Delaware.

Section 31. Counterparts. This Agreement may be executed in counterparts and each of such counterparts shall for all purposes be deemed to be an original, and both such counterparts shall together constitute but one and the same instrument.

Section 32. Descriptive Headings. Descriptive headings of the several Sections of this Agreement are inserted for convenience only and shall not control or affect the meaning or construction of any of the provisions of this Agreement.

Section 33. Grammatical Construction. Throughout this Agreement, where such meanings would be appropriate, (a) any pronouns used herein shall include the corresponding masculine, feminine or neuter forms (e.g., references to "he" shall also include "she" and "it" and references to "who" and "whom" shall also include "which") and (b) the plural form of nouns and pronouns shall include the singular and vice-versa.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and their respective corporate seals to be hereunto affixed and attested, all as of the day and year first above written.

Spherix Incorporated

By: \_\_\_\_\_

Equity Stock Transfer , LLC  
as Rights Agent

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

FORM OF  
CERTIFICATE OF DESIGNATION, PREFERENCES AND RIGHTS  
OF SERIES A PARTICIPATING PREFERRED STOCK  
OF  
SPHERIX INCORPORATED

Pursuant to Section 151 of the Corporation Law  
of the State of Delaware

Spherix Incorporated, a corporation organized and existing under the General Corporation Law of the State of Delaware, in accordance with the provisions of Section 151 thereof, DOES HEREBY CERTIFY:

That pursuant to the authority conferred upon the Board of Directors by the Certificate of Incorporation of the Corporation, as amended, the Board of Directors on January 1, 2013, adopted the following resolution creating a series of five hundred thousand (500,000) shares of Preferred Stock designated as Series A Participating Preferred Stock:

RESOLVED, that pursuant to the authority vested in the Board of Directors by ARTICLE FOURTH of the Certificate of Incorporation and out of the Preferred Stock authorized therein, the Board hereby authorizes that a series of Preferred Stock of the Corporation be, and it hereby is, created and approved for issuance in accordance with the Rights Agreement dated as of January 1, 2013, between the Corporation and Equity Stock Transfer, LLC, and that the designation and amount thereof and the voting powers, preferences and relative, participating, optional and other special rights of the shares of such series, and the qualifications, limitations or restrictions thereof be, and hereby are, as follows:

Section 1. Designation and Amount. The shares of such series shall be designated as Series A Participating Preferred Stock (the "Series A Preferred Stock") and the number of shares constituting such series shall be five hundred thousand (500,000). Such number of shares may be increased or decreased by resolution of the Board of Directors; provided, that no decrease shall reduce the number of shares of Series A Preferred Stock to a number less than the number of shares then outstanding plus the number of shares reserved for issuance upon the exercise of outstanding options, rights or warrants or upon the conversion of any outstanding securities issued by the Corporation convertible into Series A Preferred Stock.

Section 2. Dividends and Distributions.

(a) Subject to the prior and superior rights of the holders of any outstanding shares of any series of Preferred Stock ranking prior and superior to the shares of Series A Preferred Stock with respect to dividends, the holders of shares of Series A Preferred Stock, in preference to the holders of Common Stock and of any other junior stock, shall be entitled to receive, when, as and if declared by the Board of Directors out of funds legally available for the purpose, quarterly dividends payable in cash on the fifteenth day of March, June, September and December in each year (each such date being referred to herein as a "Quarterly Dividend Payment Date"), commencing on the first Quarterly Dividend Payment Date after the first issuance of a share or fraction of a share of Series A Preferred Stock, in an amount per share (rounded to the nearest cent) equal to the greater of (a) \$0.005 or (b) the Adjustment Number (as defined below) times the aggregate per share amount of all cash dividends, and the Adjustment Number times the aggregate per share amount (payable in kind) of all non-cash dividends or other distributions other than a dividend payable in shares of Common Stock or a subdivision of the outstanding shares of Common Stock (by reclassification or otherwise), declared on the Common Stock since the immediately preceding Quarterly Dividend Payment Date or, with respect to the first Quarterly Dividend Payment Date, since the first issuance of any share or fraction of a share of Series A Preferred Stock. The "Adjustment Number" shall initially be 100. In the event the Corporation shall at any time after January 1, 2013 (i) declare or pay any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock into a greater number of shares or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the Adjustment Number in effect immediately prior to such event shall be adjusted by multiplying such Adjustment Number by a fraction, the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

(b) The Corporation shall declare a dividend or distribution on the Series A Preferred Stock as provided in paragraph (A) of this Section immediately after it declares a dividend or distribution on the Common Stock (other than a dividend payable in shares of Common Stock); provided that, in the event no dividend or distribution shall have been declared on the Common Stock during the period between any Quarterly Dividend Payment Date and the next subsequent Quarterly Dividend Payment Date, a dividend of \$0.005 per share on the Series A Preferred Stock shall nevertheless be payable on such subsequent Quarterly Dividend Payment Date.

(c) Dividends shall begin to accrue and be cumulative on outstanding shares of Series A Preferred Stock from the Quarterly Dividend Payment Date next preceding the date of issue of such shares of Series A Preferred Stock, unless the date of issue of such shares is prior to the record date for the first Quarterly Dividend Payment Date, in which case dividends on such shares shall begin to accrue from the date of issue of such shares, or unless the date of issue is a Quarterly Dividend Payment Date or is a date after the record date for the determination of holders of shares of Series A Preferred Stock entitled to receive a quarterly dividend and before such Quarterly Dividend Payment Date, in either of which events such dividends shall begin to accrue and be cumulative from such Quarterly Dividend Payment Date. Accrued but unpaid dividends shall not bear interest. Dividends paid on the shares of Series A Preferred Stock in an

amount less than the total amount of such dividends at the time accrued and payable on such shares shall be allocated pro rata on a share-by-share basis among all such shares at the time outstanding. The Board of Directors may fix a record date for the determination of holders of shares of Series A Preferred Stock entitled to receive payment of a dividend or distribution declared thereon, which record date shall be no more than 30 days prior to the date fixed for the payment thereof.

Section 3. Voting Rights. The holders of shares of Series A Preferred Stock shall have the following voting rights:

(a) Each share of Series A Preferred Stock shall entitle the holder thereof to a number of votes equal to the Adjustment Number (as adjusted from time to time pursuant to Section 2(A) hereof) on all matters submitted to a vote of the stockholders of the Corporation.

(b) Except as otherwise provided herein, by law or in the Certificate of Incorporation or By-Laws, the holders of shares of Series A Preferred Stock and the holders of shares of Common Stock and any other capital stock of the Corporation having general voting rights shall vote together as one class on all matters submitted to a vote of stockholders of the Corporation.

(i) If at any time dividends on any Series A Preferred Stock shall be in arrears in an amount equal to six quarterly dividends thereon, the occurrence of such contingency shall mark the beginning of a period (herein called a "default period") that shall extend until such time when all accrued and unpaid dividends for all previous quarterly dividend periods and for the current quarterly period on all shares of Series A Preferred Stock then outstanding shall have been declared and paid or set apart for payment. During each default period, (1) the number of Directors shall be increased by two, effective as of the time of election of such Directors as herein provided, and (2) the holders of Series A Preferred Stock and the holders of other Preferred Stock upon which these or like voting rights have been conferred and are exercisable (the "Voting Preferred Stock") with dividends in arrears equal to six quarterly dividends thereon, voting as a class, irrespective of series, shall have the right to elect such two Directors.

(ii) During any default period, such voting right of the holders of Series A Preferred Stock may be exercised initially at a special meeting called pursuant to subparagraph (iii) of this Section 3 or at any annual meeting of stockholders, and thereafter at annual meetings of stockholders, provided that such voting right shall not be exercised unless the holders of at least one-third in number of the shares of Voting Preferred Stock outstanding shall be present in person or by proxy. The absence of a quorum of the holders of Common Stock shall not affect the exercise by the holders of Voting Preferred Stock of such voting right.

(iii) Unless the holders of Voting Preferred Stock shall, during an existing default period, have previously exercised their right to elect Directors, the Board of Directors may order, or any stockholder or stockholders owning in the aggregate not less than 10 percent of the total number of shares of Voting Preferred Stock outstanding, irrespective of series, may request, the calling of a special meeting of the holders of Voting Preferred Stock, which meeting shall thereupon be called by the Chairman of the Board, the President, an Executive Vice President, a Vice President or the Secretary of the Corporation. Notice of such meeting and of

any annual meeting at which holders of Voting Preferred Stock are entitled to vote pursuant to this paragraph 3(iii) shall be given to each holder of record of Voting Preferred Stock by mailing a copy of such notice to him at his last address as the same appears on the books of the Corporation. Such meeting shall be called for a time not earlier than 10 days and not later than 60 days after such order or request or, in default of the calling of such meeting within 60 days after such order or request, such meeting may be called on similar notice by any stockholder or stockholders owning in the aggregate not less than 10 percent of the total number of shares of Voting Preferred Stock outstanding. Notwithstanding the provisions of this paragraph 3(iii), no such special meeting shall be called during the period within 60 days immediately preceding the date fixed for the next annual meeting of the stockholders.

(iv) In any default period, after the holders of Voting Preferred Stock shall have exercised their right to elect Directors voting as a class, (x) the Directors so elected by the holders of Voting Preferred Stock shall continue in office until their successors shall have been elected by such holders or until the expiration of the default period, and (y) any vacancy in the Board of Directors may be filled by vote of a majority of the remaining Directors theretofore elected by the holders of the class or classes of stock which elected the Director whose office shall have become vacant. References in this paragraph 3 to Directors elected by the holders of a particular class or classes of stock shall include Directors elected by such Directors to fill vacancies as provided in clause (y) of the foregoing sentence.

(v) Immediately upon the expiration of a default period, (x) the right of the holders of Voting Preferred Stock as a class to elect Directors shall cease, (y) the term of any Directors elected by the holders of Voting Preferred Stock as a class shall terminate and (z) the number of Directors shall be such number as may be provided for in the Certificate of Incorporation or By-Laws irrespective of any increase made pursuant to the provisions of this Section 3 (such number being subject, however, to change thereafter in any manner provided by law or in the Certificate of Incorporation or By-Laws). Any vacancies in the Board of Directors effected by the provisions of clauses (y) and (z) in the preceding sentence may be filled by a majority of the remaining Directors.

(c) Except as set forth herein, holders of Series A Preferred Stock shall have no special voting rights and their consent shall not be required (except to the extent they are entitled to vote with holders of Common Stock as set forth herein) for taking any corporate action.

#### Section 4. Certain Restrictions.

(a) Whenever quarterly dividends or other dividends or distributions payable on the Series A Preferred Stock as provided in Section 2 are in arrears, thereafter and until all accrued and unpaid dividends and distributions, whether or not declared, on shares of Series A Preferred Stock outstanding shall have been paid in full, the Corporation shall not:

(i) declare or pay dividends on, or make any other distributions on, any shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Preferred Stock;

(ii) declare or pay dividends on or make any other distributions on any shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Preferred Stock, except dividends paid ratably on the Series A Preferred Stock and all such parity stock on which dividends are payable or in arrears in proportion to the total amounts to which the holders of all such shares are then entitled;

(iii) redeem or purchase or otherwise acquire for consideration shares of any stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Preferred Stock, provided that the Corporation may at any time redeem, purchase or otherwise acquire shares of any such junior stock in exchange for shares of any stock of the Corporation ranking junior (either as to dividends or upon dissolution, liquidation or winding up) to the Series A Preferred Stock; or

(iv) purchase or otherwise acquire for consideration any shares of Series A Preferred Stock, or any shares of stock ranking on a parity with the Series A Preferred Stock, except in accordance with a purchase offer made in writing or by publication (as determined by the Board of Directors) to all holders of such shares upon such terms as the Board of Directors, after consideration of the respective annual dividend rates and other relative rights and preferences of the respective series and classes, shall determine in good faith will result in fair and equitable treatment among the respective series or classes.

(b) The Corporation shall not permit any subsidiary of the Corporation to purchase or otherwise acquire for consideration any shares of stock of the Corporation unless the Corporation could, under paragraph (a) of this Section 4, purchase or otherwise acquire such shares at such time and in such manner.

Section 5. Reacquired Shares. Any shares of Series A Preferred Stock purchased or otherwise acquired by the Corporation in any manner whatsoever shall be retired and cancelled promptly after the acquisition thereof. All such shares shall upon their cancellation become authorized but unissued shares of preferred stock and may be reissued as part of a new series of preferred stock to be created by resolution or resolutions of the Board of Directors, subject to the conditions and restrictions on issuance set forth herein, in the Certificate of Incorporation or By-laws or otherwise required by law.

Section 6. Liquidation, Dissolution or Winding Up. Upon any liquidation, dissolution or winding up of the Corporation, no distribution shall be made (A) to the holders of shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Preferred Stock unless, prior thereto, the holders of shares of Series A Preferred Stock shall have received the greater of (i) \$0.0001 per share, plus an amount equal to accrued and unpaid dividends and distributions thereon, whether or not declared, to the date of such payment, and (ii) an aggregate amount per share, equal to the Adjustment Number (as adjusted from time to time pursuant to Section 2(a) hereof) times the aggregate amount to be distributed per share to holders of Common Stock, or (B) to the holders of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Preferred Stock, except distributions made ratably on the Series A Preferred Stock and all other

such parity stock in proportion to the total amounts to which the holders of all such shares are entitled upon such liquidation, dissolution or winding up.

Section 7. Consolidation, Merger, etc. In case the Corporation shall enter into any consolidation, merger, combination or other transaction in which the shares of Common Stock are exchanged for or changed into other stock or securities, cash and/or any other property, then in any such case the shares of Series A Preferred Stock then outstanding shall at the same time be similarly exchanged or changed in an amount per share equal to the Adjustment Number (as adjusted from time to time pursuant to Section 2(a) hereof) times the aggregate amount of stock, securities, cash and/or any other property (payable in kind), as the case may be, into which or for which each share of Common Stock is changed or exchanged.

Section 8. No Redemption. The shares of Series A Preferred Stock shall not be redeemable.

Section 9. Amendment. The Certificate of Incorporation of the Corporation shall not be amended in any manner which would materially alter or change the powers, preferences or special rights of the Series A Preferred Stock so as to affect them adversely without the affirmative vote of the holders of two-thirds of the outstanding shares of Series A Preferred Stock, if any, voting together as a single class. At any time when there are no shares of Series A Preferred Stock outstanding, the number, designation, preferences and rights of the Series A Preferred Stock as set forth in this Certificate of Designation may be amended by the Board of Directors in the manner provided in Section 151(g) of the Delaware General Corporation Law.

Section 10. Prior Filing. The Certificate of Designation filed on March 1, 2001 is hereby rescinded and terminated.

IN WITNESS WHEREOF, I have executed and subscribed this Certificate and do affirm the foregoing as true under the penalties of perjury as of the 1<sup>st</sup> day of January, 2013.

SPHERIX INCORPORATED

By: \_\_\_\_\_

[Form of Rights Certificate]

Certificate No. R- \_\_\_\_\_ Rights

NOT EXERCISABLE AFTER DECEMBER 31, 2017 OR EARLIER IF NOTICE OF REDEMPTION OR EXCHANGE IS GIVEN. THE RIGHTS ARE SUBJECT TO REDEMPTION OR EXCHANGE, AT THE OPTION OF THE COMPANY, ON THE TERMS SET FORTH IN THE RIGHTS AGREEMENT. UNDER CERTAIN CIRCUMSTANCES, RIGHTS BENEFICIALLY OWNED BY AN ACQUIRING PERSON OR AN AFFILIATE OR ASSOCIATE OF AN ACQUIRING PERSON (AS SUCH TERMS ARE DEFINED IN THE RIGHTS AGREEMENT) AND ANY SUBSEQUENT HOLDER OF SUCH RIGHTS MAY BECOME NULL AND VOID.

## Rights Certificate

## SPHERIX INCORPORATED

This certifies that \_\_\_\_\_, or registered assigns, is the registered owner of the number of Rights set forth above, each of which entitles the owner thereof, subject to the terms, provisions and conditions of the Rights Agreement dated as of January 1, 2013 (the "Rights Agreement") between Spherix Incorporated, a Delaware corporation (the "Company"), and Equity Stock Transfer, LLC, a \_\_\_\_\_ limited liability company (the "Rights Agent"), unless notice of redemption or exchange shall have been previously given by the Company, to purchase from the Company at any time after the Distribution Date (as such term is defined in the Rights Agreement) and prior to 5:00 P.M. Baltimore, Maryland time) on December 31, 2017, at the principal corporate trust office of the Rights Agent, or at the office of its successor as Rights Agent, one one-hundredth of a fully paid nonassessable share of the Series A Participating Preferred Stock, no par value, of the Company (the "Preferred Stock"), at a purchase price (the "Purchase Price") of \$7.46 per one one-hundredth share, upon presentation and surrender of this Rights Certificate with the Form of Election to Purchase duly executed. The Purchase Price may be paid in cash or by certified bank check or bank draft payable to the order of the Company.

This Rights Certificate is subject to all of the terms, provisions and conditions of the Rights Agreement, which terms, provisions and conditions are hereby incorporated herein by reference and made a part hereof and to which Rights Agreement reference is hereby made for a full description of the rights, limitations of rights, obligations, duties and immunities hereunder of the Rights Agent, the Company and the holders of the Rights Certificates. Capitalized terms used but not defined in this Rights Certificate that are defined in the Rights Agreement shall have the same meanings ascribed to them in the Rights Agreement. Copies of the Rights Agreement are on file at the principal executive offices of the Company and the above-mentioned office of the Rights Agent.

As provided in the Rights Agreement, the Purchase Price and the number of shares of Preferred Stock or other securities, cash or other property which may be purchased upon the

exercise of the Rights evidenced by this Rights Certificate are subject to modification and adjustment upon the happening of certain events.

If the Rights evidenced by this Rights Certificate are or were formerly beneficially owned, on or after the earlier of the Distribution Date and the Trigger Date, by (i) an Acquiring Person or any Associate or Affiliate of an Acquiring Person, (ii) a direct or indirect transferee of an Acquiring Person (or of any Associate or Affiliate of an Acquiring Person) who becomes or becomes entitled to be a transferee after the Acquiring Person becomes such, or (iii) a direct or indirect transferee of an Acquiring Person (or of an Associate or Affiliate of such Acquiring Person) who becomes or becomes entitled to be a transferee prior to or concurrently with the Acquiring Person becoming such and receives such Rights pursuant to either (A) a direct or indirect transfer (whether or not for consideration) from the Acquiring Person (or from an Associate or Affiliate of such Acquiring Person) to holders of equity interests in such Acquiring Person (or to holders of equity interests in any Associate or Affiliate of such Acquiring Person) or to any Person with whom the Acquiring Person (or an Associate or Affiliate of such Acquiring Person) has any continuing agreement, arrangement or understanding regarding the transferred Rights or (B) a direct or indirect transfer which a majority of the Board of Directors of the Company determines is part of a plan, arrangement or understanding which has as a primary purpose or effect the avoidance of Section 7(e) of the Rights Agreement, such Rights shall, immediately upon the occurrence of a Triggering Event and without any further action, be null and void and no holder of such Rights (including any subsequent holder) shall have any rights whatsoever with respect to such Rights whether under the Rights Agreement or otherwise, provided, however, that, in the case of transferees under clause (ii) or clause (iii) above, any Rights beneficially owned by such transferee shall be null and void only if and to the extent such Rights were formerly beneficially owned by a Person who was, at the time such Person beneficially owned such Rights, or who later became, an Acquiring Person or an Affiliate or Associate of such Acquiring Person.

This Rights Certificate, with or without other Rights Certificates, upon surrender at the principal corporate trust office of the Rights Agent, may be exchanged for another Rights Certificate or Rights Certificates of like tenor and date evidencing Rights entitling the holder to purchase a like aggregate number of shares of Preferred Stock or other property as the Rights evidenced by the Rights Certificate or Rights Certificates surrendered entitled such holder to purchase. If this Rights Certificate shall be exercised in part, the holder shall be entitled to receive upon surrender hereof another Rights Certificate or Rights Certificates for the number of whole Rights not exercised.

Subject to the provisions of the Rights Agreement, the Rights evidenced by this Certificate (a) may be redeemed by the Board of Directors of the Company at its option at a redemption price of \$.001 per Right, subject to adjustment, payable, at the election of the Company, in cash or shares (including fractional shares) of Common Stock or such other consideration as the Board of Directors of the Company may determine, at any time prior to the earlier of (i) the Trigger Date and (ii) the Expiration Date, or (b) may be exchanged by the Board of Directors of the Company, at its option, in whole or in part, for shares of the Company's Common Stock or other equivalent securities on a one-for-one basis, at any time after the Trigger Date and prior to (i) any Person (other than an Exempt Person), together with all Affiliates and

Associates of such Person, becoming the Beneficial Owner of 50 percent or more of the Common Stock then outstanding and (ii) the occurrence of a Business Combination.

No fractional shares of Preferred Stock (other than fractions that are integral multiples of one one-hundredth of a share of Preferred Stock, which may, at the election of the Company, be evidenced by depository receipts) are required to be issued upon the exercise of any Right or Rights evidenced hereby, but in lieu thereof the Company may elect to (i) evidence fractional shares by depository receipts, (ii) issue scrip or warrants in registered form (either represented by a certificate or uncertificated) or in bearer form (represented by a certificate) which shall entitle the holder to receive a full share upon the surrender of such scrip or warrants aggregating a full share, or (iii) make a cash payment, as provided in the Rights Agreement.

No holder of this Rights Certificate, as such, shall be entitled to vote or to receive dividends on, or shall be deemed for any purpose the holder of, Preferred Stock or any other securities, cash or property which may at any time be issuable on the exercise hereof, nor shall anything contained in the Rights Agreement or this Certificate be construed to confer upon the holder hereof, as such, any of the rights of a stockholder of the Company, including, without limitation, any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action, or to receive notice of meetings or other actions affecting stockholders (except as provided in the Rights Agreement), or to receive dividends or subscription rights, or to institute, as a holder of Preferred Stock or other securities issuable on the exercise of the Rights represented by this Certificate, any derivative action, or otherwise, until and only to the extent the Right or Rights evidenced by this Rights Certificate shall have been exercised as provided in the Rights Agreement.

This Rights Certificate shall not be valid or obligatory for any purpose until it shall have been countersigned by the Rights Agent.

WITNESS the facsimile signature of the proper officers of the Company and its corporate seal. Dated as of \_\_\_\_\_.

SPHERIX INCORPORATED

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

Countersigned:

Equity Stock Transfer, LLC

By: \_\_\_\_\_  
Authorized Officer

[Form of Reverse Side of Rights Certificate]

FORM OF ASSIGNMENT

(To be executed by the registered holder if such holder desires to transfer the Rights Certificate.)

FOR VALUE RECEIVED the undersigned \_\_\_\_\_ hereby sells,  
assigns and transfers unto \_\_\_\_\_

\_\_\_\_\_  
(Please print name and address of transferee)

Rights evidenced by this Rights Certificate, together with all right, title and interest therein, and does hereby irrevocably constitute and appoint \_\_\_\_\_ with a power of Attorney to transfer the said Rights and a Rights Certificate evidencing such Rights on the books of \_\_\_\_\_, with full power of substitution.

A new Rights Certificate evidencing the remaining balance, if any, of such Rights not hereby sold, assigned and transferred shall be mailed to and registered in the name of the undersigned unless such person requests that such Rights Certificate be registered in the name of and mailed to (complete only if a Rights Certificate evidencing any remaining balance of Rights is to be registered in a name other than the undersigned):

Please insert Social Security or other identifying number of transferee: \_\_\_\_\_

\_\_\_\_\_  
(Please print name and address)  
\_\_\_\_\_

Certificate

The undersigned hereby certifies by checking the appropriate boxes that:

(1) his Rights Certificate or any Rights evidenced hereby \_\_\_ are \_\_\_ are not being sold, assigned and transferred by or on behalf of a Person who is or was an Acquiring Person or an Affiliate or Associate of an Acquiring Person (as such terms are defined in the Rights Agreement);

(2) after due inquiry and to the best knowledge of the undersigned, the undersigned \_\_\_ did \_\_\_ did not acquire any of the Rights evidenced by this Rights Certificate from any Person who is or was an Acquiring Person or an Affiliate or Associate of an Acquiring Person.

Dated: \_\_\_\_\_

\_\_\_\_\_

Signature

Signature Guaranteed:

Signatures must be guaranteed by an eligible guarantor institution with membership in a recognized signature guarantee medallion program as approved by the Stock Transfer Association.

NOTICE

The signature on the foregoing Form of Assignment must correspond to the name as written upon the face of this Rights Certificate in every particular, without alteration or enlargement or any change whatsoever.

In the event the certification set forth above in the Form of Assignment is not completed, the Company will deem the beneficial owner of the Rights evidenced by this Right Certificate to be an Acquiring Person or an Affiliate or Associate thereof (as defined in the Rights Agreement) and, in the case of an assignment or other transfer of this Rights Certificate or any Rights evidenced hereby, will affix a legend to that effect on any Rights Certificate issued in whole or partial exchange for this Rights Certificate.

FORM OF ELECTION TO PURCHASE

(To be executed if holder desires to exercise the Rights represented by this Rights Certificate)

To: SPHERIX INCORPORATED

The undersigned hereby irrevocably elects to exercise \_\_\_\_\_ Rights represented by this Rights Certificate to purchase the shares of Preferred Stock or other securities, cash or other property issuable upon the exercise of such Rights and requests that

certificates for such shares or other securities be issued in the name of, and such cash or other property be paid to:

Please insert social security or other identifying number: \_\_\_\_\_

\_\_\_\_\_  
(Please print name and address)  
\_\_\_\_\_

A new Rights Certificate evidencing the remaining balance, if any, of such Rights not hereby exercised shall be mailed to and registered in the name of the undersigned unless such person requests that such Rights Certificate be registered in the name of and mailed to (complete only if Rights Certificate evidencing any remaining balance of Rights is to be registered in a name other than the undersigned):

Please insert social security or other identifying number: \_\_\_\_\_

\_\_\_\_\_  
(Please print name and address)  
\_\_\_\_\_

#### Certificate

The undersigned hereby certifies by checking the appropriate boxes that:

(1) the Rights evidenced by this Rights Certificate \_\_\_ are \_\_\_ are not being exercised by or on behalf of a Person who is or was an Acquiring Person or an Affiliate or Associate of an Acquiring Person (as such terms are defined in the Rights Agreement);

(2) after due inquiry and to the best knowledge of the undersigned, the undersigned \_\_\_ did \_\_\_ did not acquire the Rights evidenced by this Rights Certificate from any Person who is or was an Acquiring Person or an Affiliate or Associate of an Acquiring Person.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Signature

Signature Guaranteed:

Signatures must be guaranteed by an eligible guarantor institution with membership in a recognized signature guarantee medallion program as approved by the Stock Transfer Association.

## NOTICE

The signature on the foregoing Form of Election to Purchase must correspond to the name as written upon the face of this Rights Certificate in every particular, without alteration or enlargement or any change whatsoever.

In the event the certification set forth above in the Form of Election to Purchase is not completed, the Company will deem the beneficial owner of the Rights evidenced by this Rights Certificate to be an Acquiring Person or an Affiliate or Associate thereof (as defined in the Rights Agreement) and, in the case of an assignment or other transfer of this Rights Certificate or any Rights evidenced hereby, will affix a legend to that effect on any Rights Certificate issued in whole or partial exchange for this Rights Certificate.

## SUMMARY OF RIGHTS TO PURCHASE PREFERRED SHARES

### ADOPTION OF RIGHTS PLAN

On January 1, 2013, the Board of Directors of Spherix Incorporated (the "Company") authorized the issuance of one preferred share purchase right (a "Right") for each outstanding share of common stock, par value \$0.0001 per share (the "Common Shares"), of the Company. The distribution is payable to stockholders of record at the close of business on January 1, 2013 (the "Record Date"), and with respect to all Common Shares that become outstanding after the Record Date and prior to the earliest of the Distribution Date (as defined below), the redemption of the Rights, the exchange of the Rights, and the expiration of the Rights (and, in certain cases, following the Distribution Date).

The Board adopted the Rights Agreement (as herein defined) to protect stockholders from coercive or otherwise unfair takeover tactics. In general terms, it works by imposing a significant penalty under any person or group that acquires 10% or more of the Common Shares without the approval of the Board. As a result, the overall effect of the Rights Agreement and the issuance of the Rights may be to render more difficult or discourage a merger, tender or exchange offer or other business combination involving the Company that is not approved by the Board. However, neither the Rights Agreement nor the Rights should interfere with any merger, tender or exchange offer or other business combination approved by the Board.

Each Right entitles the registered holder to purchase from the Company one one-hundredth of a share of Series A Participating Preferred Stock, no par value per share, of the Company (the "Preferred Shares") at a price of \$7.46 per one one-hundredth of a Preferred Share (the "Purchase Price"), subject to adjustment. The description and terms of the Rights are set forth in a Rights Agreement (the "Rights Agreement") between the Company and Equity Stock Transfer, LLC as Rights Agent (the "Rights Agent").

The Rights have certain anti-takeover effects. The Rights may cause substantial dilution to a person or group that attempts to acquire the Company on terms not approved by the Board of Directors, except pursuant to an offer conditioned on a substantial number of Rights being acquired. The Rights should not interfere with any merger or other business combination approved by the Board of Directors because of the Board of Directors ability to redeem the Rights, as discussed below.

### RIGHTS ATTACH TO COMMON SHARES INITIALLY

Initially and until a Distribution Date (as defined below) occurs, the Rights are attached to all Common Shares and no separate Rights certificates will be issued. During this initial period:

- The Rights are not exercisable;

- Holders, as such, have no voting rights;
- The Rights are transferred with the Common Shares and are not transferable separately from the Common Shares;
- No dividends are paid on the Rights;
- New Common Share certificates or book entry shares issued will contain a notation incorporating the Rights Agreement by reference;
- The transfer of any Common Shares will also constitute the transfer of the Rights; and

The Rights expire December 31, 2017 (the "Expiration Date") unless earlier redeemed or exchange by the Company as described below.

#### DISTRIBUTION OF RIGHTS

Separate certificates evidencing the Rights will be mailed to holders of record of the Common Shares on the "Distribution Date." The Distribution Date is the earlier to occur of the following two events:

- The tenth (10<sup>th</sup>) day after a public announcement that a person or group of affiliated or associated persons has acquired or obtained the right to acquire 10% or more of the outstanding Common Shares; or
- The tenth (10<sup>th</sup>) business day after the commencement or public disclosure of an intention to commence a tender offer or exchange offer by a person if, upon consummation of the offer, such person could acquire beneficial ownership of 10% or more of the outstanding of Common Shares.

#### RIGHT TO PURCHASE BIOSPHERICS STOCK

If a person or group acquires or obtains the right to acquire 10% or more of the outstanding Common Shares (thereby becoming an "Acquiring Person") each holder of a Right (except those held by the Acquiring Person and its affiliates and associates) will have the right to purchase, upon exercise, Common Shares (or, in certain circumstances, Preferred Shares, Common Share equivalents or cash) having a value equal to two times the exercise price of the Right. In other words, the Rights holders other than the Acquiring Person may purchase Common Shares at a 50 % discount.

For example, at the exercise price of \$7.46 per Right, each Right not owned by an Acquiring Person would entitle its holder to purchase \$14.92 worth of Common Shares (or other consideration, as noted above) for \$7.46. Assuming a value of \$3.73 per Common Share at such time, the holder of each valid Right would be entitled to purchase four (4) Common Shares for \$14.92.

## RIGHTS TO PURCHASE ACQUIRING PERSON STOCK

In the event that, at the time or after a person becomes an Acquiring Person, the Company is involved in a merger or other business combination in which (i) the Company is not the surviving corporation, (ii) Common Stock is changed or exchanged, or (iii) 50 % or more of the Company's consolidated assets or earning power are sold, then each Right (other than Rights that are or were owned by the Acquiring Person and certain related persons and transferees, which will thereafter be void) shall thereafter be exercisable for a number of shares of common stock of the acquiring company having a market value of two times the exercise price of the Right. In other words, a Rights holder may purchase the acquiring company's common stock at a 50 % discount.

## EXCHANGE OF SPHERIX STOCK FOR RIGHTS

At any time after any person or group becomes an Acquiring Person and before the Acquiring Person acquires 50 % or more of the outstanding Common Shares, the Board of Directors may exchange the Rights (other than Rights owned by the Acquiring Person which will have become void), in whole or in part, at an exchange ratio of one Common Share, or one one-hundredth of a Preferred Share (or a Common Share equivalent), per Right (subject to adjustment).

## REDEMPTION

The Rights are redeemable by the Company, at the direction of its Board of Directors, in whole but not in part at a price of \$.001 per Right at any time prior to the time that a person or a group has become an Acquiring Person. Immediately upon redemption, the right to exercise will terminate and the only right of holders will be to receive the redemption price.

## AMENDMENTS

As long as the Rights are redeemable, the terms of the Rights may be amended by the Board of Directors in its discretion without the consent of the Rights holders. After that time, no amendment may adversely affect the interests of the Rights Holder (other than the Acquiring Person).

## TERMS OF PREFERRED SHARES

The Preferred Shares purchasable upon exercise of the Rights will not be redeemable. Each Preferred Share will be entitled to a minimum preferential quarterly dividend payment equal to the greater of \$0.005 per share and 100 times the dividend declared per Common Share. In the event of liquidation, the holders of the Preferred Shares will be entitled to a minimum preferential liquidation payment equal to the greater of \$.0001 per share and 100 times the payment made per Common Share. Each Preferred Share will have 100 votes per share, voting together with the Common Shares. In the event of any merger, consolidation or other transaction

in which Common Shares are exchanged, each Preferred Share will be entitled to receive 100 times the amount received per Common Share.

#### MISCELLANEOUS

The Purchase Price payable, and the number and kind of securities, cash or other property issuable, upon exercise of the Rights are subject to adjustment from time to time to prevent dilution (i) in the event of a stock dividend or distribution on, or a subdivision or combination of, the Common Shares, (ii) upon the grant to holders of the Common Shares of rights, options or warrants to subscribe for Common Shares or securities convertible into Common Shares at less than the current market price, (iii) upon the distribution to holders of the Common Shares of securities, cash, evidences of indebtedness or assets (excluding regular periodic cash dividends out of earnings or retained earnings) and (iv) in connection with recapitalizations of the Company or reclassifications of the Common Shares.

No fractional Common Shares or Preferred Shares will be required to be issued (other than fractions of Preferred Shares which are integral multiples of one one-hundredth of a Preferred Share, which may, at the election of the Company, be evidenced by depositary receipts) and in lieu thereof, an adjustment in cash will be made based on the market price of Common Shares or Preferred Shares on the last trading date prior to the date of exercise.

Because of the nature of the Preferred Shares' dividend, liquidation and voting rights, the value of the one one-hundredth interest in a Preferred Share that may be purchased upon exercise of each Right should approximate the value of one Common Share.

A copy of the Rights Agreement has been filed with the Securities and Exchange commission as an Exhibit to an application for Registration on Form 8-A and as an Exhibit to the Company's Current Report on Form 8-K. A copy of the Rights Agreement is available free of charge from the Company. This summary description of the Rights does not purport to be complete and is qualified in its entirety by reference to the Rights Agreement, which is incorporated herein by reference.