

---

---

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

Amendment No. 2

to

**FORM S-1**  
REGISTRATION STATEMENT  
*UNDER*  
*THE SECURITIES ACT OF 1933*

**Amedica Corporation**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**3841**  
(Primary Standard Industrial  
Classification Code Number)

**84-1375299**  
(IRS Employer  
Identification No.)

**1885 West 2100 South  
Salt Lake City, UT 84119  
(801) 839-3500**

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

**B. Sonny Bal, MD**  
President and Chief Executive Officer  
Amedica Corporation  
1885 West 2100 South  
Salt Lake City, UT, 84119  
(801) 839-3500

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

*with copies to:*

**David F. Marx  
Michael R. Newton  
Dorsey & Whitney LLP  
111 South Main Street, Suite 2100  
Salt Lake City, Utah 84111**

**Barry I. Grossman  
Sarah E. Williams  
Ellenoff Grossman & Schole LLP  
1345 Avenue of the Americas, 11th Floor  
New York, NY 10105**

---

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

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

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

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer [ ]  
 Smaller reporting company [X]  
 Emerging growth company [X]

(Do not check if a smaller reporting company)

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. [ ]

**CALCULATION OF REGISTRATION FEE**

<b>Title of each class of securities to be registered</b>	<b>Proposed Maximum Aggregate Offering Price (1)</b>	<b>Amount of Registration Fee (5)</b>
Units consisting of shares of Series B Preferred Stock, par value \$0.01 per share, and Warrants to purchase shares of Common Stock, par value \$0.01 per share	\$ 12,500,000	\$ 1,556.25
Series B Preferred Stock included as part of the Units	Included with Units above	—
Warrants to purchase shares of Common Stock included as part of the Units (2)	Included with Units above	—
Common Stock issuable upon conversion of the Series B Preferred Stock (3) (4)	—	—
Common Stock issuable upon exercise of the Warrants (4)	\$ 12,500,000	\$ 1,556.25
Warrants to purchase Units consisting of shares of Series B Preferred Stock, par value \$0.01 per share, and Warrants to purchase shares of Common Stock, par value \$0.01 per share to be issued to the Underwriter (2)	\$ 500,000	\$ 62.25
Units consisting of shares of Series B Preferred Stock, par value \$0.01 per share, and Warrants to purchase shares of Common Stock, par value \$0.01 per share to be issued to the Underwriter included as part of Underwriter Warrants	Included with Underwriter Warrant above	—
Series B Preferred Stock included as part of the Units to be issued to the Underwriters	Included with Underwriter Warrant above	—
Warrants to purchase shares of Common Stock included as part of Units to be issued to the Underwriters (2)	Included with Underwriter Warrant above	—
Common Stock issuable upon conversion of the Series B Preferred Stock to be issued to the Underwriter (3)(4)	—	—
Common Stock issuable upon exercise of the Warrants to Purchase Common Stock to be issued to the Underwriter (4)	\$ 500,000	\$ 62.25
<b>Total</b>	<b>\$ 26,000,000</b>	<b>\$ 3,237.00</b>

- (1) Estimated solely for purposes of calculating the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended (the "Act").
- (2) Pursuant to Rule 457(g) of the Act, no separate registration fee is required for the Warrants because the Warrants are being registered in the same registration statement as the Common Stock of the Registrant issuable upon exercise of the Warrants.
- (3) Pursuant to Rule 457(i) of the Act, no separate registration fee is required for the Common Stock issuable upon conversion of the Series B Preferred Stock because no additional consideration will be received in connection with the exercise of the conversion privilege.
- (4) In addition to the shares of Common Stock set forth in this table, pursuant to Rule 416 under the Act, this registration statement also registers such indeterminate number of shares of Common Stock as may become issuable upon conversion or exercise of these securities as the same may be adjusted as a result of stock splits, stock dividends, recapitalizations or other similar transactions.
- (5) Calculated pursuant to Rule 457(o) based on an estimate of the total proposed maximum aggregate offering price. Registrant previously paid \$3,237.00 in connection with previous filings of this registration statement.

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

---



---

## **EXPLANATORY NOTE**

This Amendment No. 2 to the Registration Statement on Form S-1 (File No. 333-223032) of Amedica Corporation is being filed solely for the purpose of filing Exhibits 4.29 and 5.1 and a revised version of Exhibit 1.1, and amending the Exhibit Index. Other than new and revised exhibits and the Exhibit Index, the remainder of the Registration Statement is unchanged.

## PART II

### INFORMATION NOT REQUIRED IN PROSPECTUS

#### Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth an itemization of the various costs and expenses, all of which we will pay, in connection with the registration of the securities under this registration statement. All of the amounts shown are estimated except the SEC Registration Fee and FINRA Filing Fee.

SEC Registration Fee	\$	3,175.00
FINRA Filing Fee		4,325.00
Legal Fees and Expenses		150,000.00
Accounting Fees and Expenses		70,000.00
Transfer Agent Fee and Expenses		10,000.00
Miscellaneous		100,000.00
Total	\$	<u>337,500.00</u>

#### Item 14. Indemnification of Directors and Officers.

Our restated certificate of incorporation and restated bylaws provide that each person who was or is made a party or is threatened to be made a party to or is otherwise involved (including, without limitation, as a witness) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was one of our directors or officers or is or was serving at our request as a director, officer, member, manager or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan, whether the basis of such proceeding is alleged action in an official capacity as a director, officer or trustee or in any other capacity while serving as a director, officer or trustee, shall be indemnified and held harmless by us to the fullest extent authorized by the Delaware General Corporation Law, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits us to provide broader indemnification rights than such law permitted us to provide prior to such amendment) against all expense, liability and loss (including attorneys' fees, judgments, fines, Employee Retirement Income Security Act excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such indemnitee in connection therewith. These provisions limit the liability of our directors and officers to the fullest extent permitted under Delaware law. A director will not receive indemnification if he or she is found not to have acted in good faith.

Section 145 of the Delaware General Corporation Law permits a corporation to indemnify any director or officer of the corporation against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with any action, suit or proceeding brought by reason of the fact that such person is or was a director or officer of the corporation, if such person acted in good faith and in a manner that he reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, if he or she had no reasonable cause to believe his or her conduct was unlawful. In a derivative action (i.e., one brought by or on behalf of the corporation), indemnification may be provided only for expenses actually and reasonably incurred by any director or officer in connection with the defense or settlement of such an action or suit if such person acted in good faith and in a manner that he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be provided if such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the court in which the action or suit was brought shall determine that such person is fairly and reasonably entitled to indemnity for such expenses despite such adjudication of liability.

Pursuant to Section 102(b)(7) of the Delaware General Corporation Law, Article Eighth of our restated certificate of incorporation eliminates the liability of a director to us or our stockholders for monetary damages for such a breach of fiduciary duty as a director, except for liabilities arising:

- from any breach of the director’s duty of loyalty to us or our stockholders;
- from acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law; or
- from any transaction from which the director derived an improper personal benefit.

We carry insurance policies insuring our directors and officers against certain liabilities that they may incur in their capacity as directors and officers. We have entered into indemnification agreements with certain of our executive officers and directors. These agreements, among other things, indemnify and advance expenses to our directors and officers for certain expenses, including attorney’s fees, judgments, fines and settlement amounts incurred by any such person in any action or proceeding, including any action by us arising out of such person’s services as our director or officer, or any other company or enterprise to which the person provides services at our request. We believe that these provisions and agreements are necessary to attract and retain qualified persons as directors and officers. We have entered into agreements to indemnify all of our directors and officers.

#### **Item 15. Recent Sales of Unregistered Securities**

Since March 1, 2015, we have sold the following securities that were not registered under the Securities Act. All share numbers and prices set forth below have been adjusted to reflect a reverse stock split effective as of January 25, 2016 whereby each 15 shares of common stock were replaced with one share of common stock (with no fractional shares issued) and the subsequent reverse stock split effective November 10, 2017 whereby each 12 shares of common stock were replaced with one share of common stock (with no fractional shares issued).

The sale and issuance of the securities set forth below were deemed to be exempt from registration under the Securities Act by virtue of Section 4(2) or Rule 506 promulgated under Regulation D promulgated thereunder and Section 3(a)(9). Each of the recipients of securities in these transactions was an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act and had adequate access, through employment, business or other relationships, to information about us. No underwriters were involved in these transactions.

On September 8, 2015, we issued to investors Series A Warrants and Series C Warrants, each exercisable for 72,908 shares of our common stock.

On October 19, 2015, we issued 1,334 shares of our common stock to a service provider for services with respect to certain corporate development activities.

On January 28, 2016, we issued a warrant to purchase 6,250 shares of our common stock to a financial advisor.

On April 4, 2016 and again on April 27, 2016, in connection with a debt exchange agreement we issued to the lender warrants to purchase 8,334 shares of common stock of the Company.

On July 28, 2017, we closed on a \$2.5 million term loan (the “Loan”) with North Stadium Investments, LLC (“North Stadium”), a company owned and controlled by the Company’s Chief Executive Officer and Chairman of the Board, Dr. Sonny Bal. In connection with the Loan, the Company issued to North Stadium, a Secured Promissory Note in the amount of \$2.5 million (the “Note”). The Note bears interest at the rate of 10% per annum, requires the Company to make monthly interest only payments for a period of 12 months, and principal and any unpaid accrued interest are due and payable 12 months from the effective date of the Note, July 28, 2017. The Note is secured by substantially all of the assets of the Company pursuant to a security agreement between the Company and North Stadium dated July 28, 2017 (the “Security Agreement”), and is junior to the already existing security interest in such assets of the Company held by Hercules Capital, Inc. In connection with the Loan and as additional consideration for the Loan, the Company issued to North Stadium a warrant to acquire up to 55,000 common shares with a purchase price set at \$5.04 per share and a five-year term (the “Warrant”).

On January 3, 2018, Amedica Corporation (the “Company”) and its wholly owned subsidiary US Spine, Inc. entered into an Assignment Agreement (the “Assignment Agreement”) with certain accredited investors (collectively the “Assignees” and each an “Assignee”), Hercules Technology III, L.P. (“HT III”) and Hercules Capital, Inc. (“HC” and, together with HT III, “Hercules”), pursuant to which Hercules assigned to the Assignees all amounts remaining due under the Loan and Security Agreement, dated June 30, 2014, as amended, between the Company and Hercules (the “Loan and Security Agreement”) and (2) the note (the “Hercules Note”) between the Company and Hercules evidencing the amounts due under the Loan and Security Agreement. The total amount assigned by Hercules to the Assignees equals in the aggregate \$2,264,623, which is secured by the same collateral underlying the Loan and Security Agreement. The Company entered into an exchange agreement (the “Exchange Agreement”) with the Assignees, pursuant to which the Company agreed to exchange (the “Exchange”) the Hercules Note held by the Assignees for senior secured convertible promissory notes each in the principal amount of \$1,132,311 for an aggregate principal amount of \$2,264,623 (the “Exchange Notes”). The Exchange Notes will mature on February 3, 2019.

On January 31, 2018, we entered into a securities purchase agreement (the “Purchase Agreement”) with L2 Capital LLC. Pursuant to the Purchase Agreement, we agreed to sell an original issue discount promissory note in the aggregate principal amount of up to \$840,000 (the “Note”) for an aggregate purchase price of up to \$750,000 and warrants to purchase up to an aggregate of 68,257 shares of Common Stock.

On March 6, 2018, in connection with the Amendment Agreement described above in Description of Securities – Description of Other Outstanding Securities of the Company – March 2018 Warrant Amendment, the Company issued to the Series E Investors warrants to purchase up to 668,335 shares of Common Stock at an exercise price per share equal to \$2.00 per share, the closing bid price for our Common Stock on March 5, 2018 (the “New Warrants”). In addition, the Company is in the process of granting to the underwriter securities purchase warrants to purchase up to 10,025 shares of Common Stock at an exercise price per share equal to \$2.00 per share.

#### **Item 16. Exhibits and Financial Statement Schedules.**

(a) Exhibits

The exhibits listed on the accompanying Exhibit Index are filed or incorporated by reference as part of this registration statement and such Exhibit Index is incorporated by reference.

(b) Financial Statement Schedules

None.

#### **Item 17. Undertakings**

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

*Provided, however,* that paragraphs (a)(1)(i), (ii) and (iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
  - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
  - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
  - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.
- (d) The undersigned registrant hereby undertakes that:
  - (1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and
  - (2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Exhibit Description</b>	<b>Filed with this Report</b>	<b>Incorporated by Reference herein from Form or Schedule</b>	<b>Filing Date</b>	<b>SEC File/Reg. Number</b>
1.1	<a href="#">Form of Underwriting Agreement</a>	X			
3.1	<a href="#">Restated Certificate of Incorporation of the Registrant</a>		Form 8-K (Exhibit 3.1)	2/20/14	001-33624
3.2	<a href="#">Certificate of Amendment to the Restated Certificate of Incorporation of Amedica Corporation</a>		Form 8-K (Exhibit 3.1)	1/22/16	001-33624
3.3	<a href="#">Certificate of Amendment to the Restated Certificate of Incorporation of Amedica Corporation</a>		Form 8-K (Exhibit 3.1)	11/16/17	001-33624
3.4	<a href="#">Restated Bylaws of the Registrant</a>		Form 8-K (Exhibit 3.1)	2/20/14	001-33624
3.5	<a href="#">Form of Certificate of Designation of Series B Preferred Stock</a>		Form S-1 (Exhibit 3.5)	4/26/18	333-223032
4.1	<a href="#">Form of Common Stock Certificate of the Registrant</a>		Amendment No. 3 to Form S-1 (Exhibit 4.1)	1/29/14	333-192232
4.2	<a href="#">Warrant by and between the Registrant and GE Capital Equity Investments, Inc., dated as of December 17, 2012</a>		Form S-1 (Exhibit 4.10)	11/8/13	333-192232
4.3	<a href="#">Warrant by and between the Registrant and Zions First National Bank, dated as of December 17, 2012</a>		Form S-1 (Exhibit 4.11)	11/8/13	333-192232
4.4	<a href="#">Form of Warrant to Purchase Shares of Common Stock of the Registrant, issued on March 4, 2011 and May 9, 2011</a>		Form S-1 (Exhibit 4.12)	11/8/13	333-192232
4.5	<a href="#">Form of Amendment to Warrant to Purchase Shares of Common Stock of the Registrant, dated as of December 18, 2012</a>		Form S-1 (Exhibit 4.13)	11/8/13	333-192232
4.6	<a href="#">Form of Amendment No. 2 to Warrant to Purchase Shares of Common Stock of the Registrant, dated as of February 1, 2013</a>		Form S-1 (Exhibit 4.14)	11/8/13	333-192232
4.7	<a href="#">Form of Warrant to Purchase Shares of Common Stock of the Registrant, issued on August 30, 2013 and September 20, 2013, as amended</a>		Amendment No. 2 to Form S-1 (Exhibit 4.17)	12/20/13	333-192232



4.8	<a href="#"><u>Form of Amendment to Warrant to Purchase Common Stock of the Registrant, dated as of December 23, 2013</u></a>	Amendment No. 3 to Form S-1 (Exhibit 4.17.1)	1/29/14	333-192232
4.9	<a href="#"><u>Form of Warrant to Purchase Shares of Common Stock of the Registrant, issued to TGP Securities, Inc. on August 30, 2013 and September 20, 2013, as amended</u></a>	Amendment No. 2 to Form S-1 (Exhibit 4.20)	12/20/13	333-192232
4.10	<a href="#"><u>Form of Amendment to Warrant to Purchase Shares of Common Stock of the Registrant, issued to TGP Securities, Inc., dated as of December 23, 2013</u></a>	Amendment No. 3 to Form S-1 (Exhibit 4.21)	1/29/14	333-192232
4.11	<a href="#"><u>Hercules Warrant to Purchase Common Stock</u></a>	Form 8-K (Exhibit 4.3)	7/1/2014	001-33624
4.12	<a href="#"><u>Form of Warrant to be Issued to Investors in the Offering</u></a>	Amendment No. 3 to Form S-1 (Exhibit 4.24)	11/19/14	333-199753
4.13	<a href="#"><u>Form of Unit Purchase Option to be Issued to the Underwriters in the Offering</u></a>	Amendment No. 3 to Form S-1 (Exhibit 4.25)	11/19/14	333-199753
4.14	<a href="#"><u>Form of Warrant Agent Agreement by and between the Registrant and American Stock Transfer and Trust Company</u></a>	Amendment No. 3 to Form S-1 (Exhibit 4.26)	11/19/14	333-199753
4.15	<a href="#"><u>Form of Warrant to Purchase Shares of Common Stock of the Registrant issued on September 17, 2014.</u></a>	Form 10-K (Exhibit 4.27)	3/24/15	001-33624
4.16	<a href="#"><u>Form of Warrant to Purchase Shares of Common Stock of the Registrant issued on November 12, 2014.</u></a>	Form 10-K (Exhibit 4.28)	3/24/15	001-33624
4.17	<a href="#"><u>Form of Amended and Restated Series A Warrant</u></a>	Form 8-K (Exhibit 4.1)	12/14/15	001-33624
4.18	<a href="#"><u>Form of Common Stock Purchase Warrant issued on April 4, 2016.</u></a>	Form 8-K (Exhibit 4.1)	4/05/16	001-33624
4.19	<a href="#"><u>Form of Series E Warrant</u></a>	Amendment No. 3 to Form S-1 (Exhibit 4.25)	6/30/16	333-211520
4.20	<a href="#"><u>Form of Underwriters Warrant Issued in July 2016 Offering</u></a>	Amendment No. 3 to Form S-1 (Exhibit 4.26)	6/30/16	333-211520

4.21	<a href="#">Form of Warrant</a>		Form 8-K (Exhibit 4.1)	1/20/17	001-33624
4.22	<a href="#">Secured Promissory Note with North Stadium Investments, LLC</a>		Form 8-K (Exhibit 4.1)	8/3/17	001-33624
4.23	<a href="#">North Stadium Investments, LLC Warrant to Purchase Common Stock</a>		Form 8-K (Exhibit 4.2)	8/3/17	001-33624
4.24	<a href="#">Amended and Restated L2 Capital LLC Common Stock Purchase Warrant</a>		Form S-1 (Exhibit 4.24)	4/26/18	333-223032
4.25	<a href="#">Form of Warrant Issued to Karl Kipke</a>		Form S-1 (Exhibit 4.25)	4/26/18	333-223032
4.26	<a href="#">Form of Series F Common Stock Purchase Warrant</a>		Form S-1 (Exhibit 4.26)	4/26/18	333-223032
4.27	<a href="#">Form of Common Stock Warrant</a>		Form S-1 (Exhibit 4.27)	4/26/18	333-223032
4.28	<a href="#">Form of Warrant Agency Agreement between Amedica Corporation and American Stock Transfer and Trust Company, LLC</a>		Form S-1 (Exhibit 4.28)	4/26/18	333-223032
4.29	<a href="#">Form of Warrant to be Issued to the Underwriters</a>	X			
4.30	<a href="#">Westlake Securities LLC Common Stock Purchase Warrant</a>		Form S-1 (Exhibit 4.30)	4/26/18	333-223032
4.31	<a href="#">Form of Common Stock Purchase Warrant Issued on September 11, 2015</a>		Form 8-K (Exhibit 4.1)	9/18/15	001-33624
5.1	<a href="#">Opinion of Dorsey &amp; Whitney LLP</a>	X			
10.1	<a href="#">Loan and Security Agreement by and among the Registrant, its subsidiary, Hercules Technology Growth Capital, Inc., and Hercules Technology III, L.P., dated as of June 30, 2014</a>		Form 8-K (Exhibit 10.3)	7/1/2014	001-33624
10.2	<a href="#">Centrepointe Business Park Lease Agreement Net by and between the Registrant and Centrepointe Properties, LLC, dated as of April 21, 2009</a>		Form S-1 (Exhibit 10.10)	11/8/13	333-192232
10.3	<a href="#">First Addendum to Centrepointe Business Park Lease Agreement Net by and between the Registrant and Centrepointe Properties, LLC, dated as of January 31, 2012</a>		Form S-1 (Exhibit 10.11)	11/8/13	333-192232
10.4	<a href="#">Form of Change of Control Agreement*</a>		Form 8-K (Exhibit 10.1)	7/22/15	001-33624

10.5	<a href="#"><u>Form of Indemnification Agreement by and between the Registrant and its officers and directors</u></a>	Amendment No. 2 to Form S-1 (Exhibit 10.14)	12/20/13	333-192232
10.6	<a href="#"><u>Amedica Corporation Amended and Restated 2012 Equity Incentive Plan*</u></a>	Amendment No. 4 to Form S-1 (Exhibit 10.15)	2/12/14	333-192232
10.7	<a href="#"><u>Form of 2012 Stock Option Grant Notice and Stock Option Agreement*</u></a>	Amendment No. 4 to Form S-1 (Exhibit 10.16)	2/12/14	333-192232
10.8	<a href="#"><u>Form of 2012 Restricted Stock Award and Restricted Stock Unit Agreement*</u></a>	Amendment No. 4 to Form S-1 (Exhibit 10.17)	2/12/14	333-192232
10.9	<a href="#"><u>Amedica Corporation 2003 Stock Option Plan*</u></a>	Form S-1 (Exhibit 10.18)	11/8/13	333-192232
10.10	<a href="#"><u>Form of 2003 Non-Qualified Stock Option Agreement and Notice of Exercise of Non-Qualified Stock Option thereunder*</u></a>	Form S-1 (Exhibit 10.19)	11/8/13	333-192232
10.11	<a href="#"><u>Form of 2003 Incentive Stock Option Agreement and Notice of Exercise of Incentive Stock Option thereunder*</u></a>	Form S-1 (Exhibit 10.20)	11/8/13	333-192232
10.12	<a href="#"><u>Consent and First Amendment to Loan and Security Agreement dated September 8, 2015 by and among Hercules Technology Growth Capital Inc., the financial institutions signatory thereto, Amedica Corporation, and the guarantors signatory thereto.</u></a>	Form 8-K (Exhibit 10.1)	9/8/15	001-33624
10.13	<a href="#"><u>First Amendment to Warrant to Purchase Shares of Common Stock of Amedica Corporation dated September 8, 2015, by and between Amedica Corporation and Hercules Technology III, L.P.</u></a>	Form 8-K (Exhibit 10.2)	9/8/15	001-33624
10.14	<a href="#"><u>Form of Securities Purchase Agreement between Amedica Corporation and the Purchasers Dated September 8, 2015</u></a>	Form 8-K (Exhibit 10.5)	9/8/15	001-33624
10.15	<a href="#"><u>Exchange Agreement dated April 4, 2016, by and among Amedica Corporation and Riverside Merchant Partners, LLC</u></a>	Form 8-K (Exhibit 10.2)	4/5/16	001-33624
10.16	<a href="#"><u>Warrant Agency Agreement, dated July 8, 2016, by and between Amedica Corporation and American Stock Transfer &amp; Trust Company, LLC</u></a>	Form 8-K (Exhibit 10.1)	7/8/16	001-33624

10.17	<a href="#">Warrant Agency Agreement dated January 24, 2017, by and between Amedica Corporation and American Stock Transfer &amp; Trust Company, LLC</a>	Form 8-K (Exhibit 10.1)	1/24/17	001-33624
10.18	<a href="#">Security Agreement, dated July 28, 2017</a>	Form 8-K (Exhibit 10.1)	8/3/17	001-33624
10.19	<a href="#">Assignment Agreement, dated January 3, 2018, by and among the Company, US Spine, Inc., MEF I, L.P., Anson Investments Master Fund LP, Hercules Technology III, L.P. and Hercules Capital, Inc.</a>	Form 8-K (Exhibit 10.1)	1/4/18	001-33624
10.20	<a href="#">Exchange Agreement, dated January 3, 2018, by and among Amedica Corporation and MEF I, L.P.</a>	Form 8-K (Exhibit 10.2)	1/4/18	001-33624
10.21	<a href="#">Exchange Agreement, dated January 3, 2018, by and among Amedica Corporation and Anson Investments Master Fund LP</a>	Form 8-K (Exhibit 10.3)	1/4/18	001-33624
10.22	<a href="#">Senior Secured Convertible Promissory Note, dated January 3, 2018, by and among Amedica Corporation and MEF I, L.P.</a>	Form 8-K (Exhibit 10.4)	1/4/18	001-33624
10.23	<a href="#">Senior Secured Convertible Promissory Note, dated January 3, 2018, by and among Amedica Corporation and Anson Investments</a>	Form 8-K (Exhibit 10.5)	1/4/18	001-33624
10.24	<a href="#">Securities Purchase Agreement, dated January 30, 2018, by and among the Company and L2 Capital, LLC</a>	Form 8-K (Exhibit 10.1)	2/01/18	001-33624
10.25	<a href="#">Amended and Restated Promissory Note payable to L2 Capital</a>	Form S-1 (Exhibit 10.25)	4/26/18	333-223032
10.26	<a href="#">Form of Warrant Amendment Agreement</a>	Form S-1 (Exhibit 10.26)	4/26/18	333-223032
16.1	<a href="#">Letter of BDO, dated September 22, 2017</a>	Form 8-K (Exhibit 16.1)	9/22/17	001-33624
21.1	<a href="#">List of Subsidiaries of the Registrant</a>	Form S-1 (Exhibit 21.1)	11/8/13	333-192232
23.1	<a href="#">Consent of Independent Registered Public Accounting Firm, Tanner LLC</a>	Form S-1 (Exhibit 23.1)	4/26/18	333-223032
23.2	<a href="#">Consent of Independent Registered Public Accounting Firm, BDO USA, LLP</a>	Form S-1 (Exhibit 23.2)	4/26/18	333-223032
23.3	<a href="#">Consent of Dorsey &amp; Whitney LLP (included with Exhibit 5.1)</a>	X		
24.1	<a href="#">Power of Attorney</a>	Form S-1 (Exhibit 24.1)	2/14/18	333-223032

\* Indicates Management Contract or Compensatory plan or arrangement.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Salt Lake City, Utah on May 1, 2018.

AMEDICA CORPORATION

By: /s/ B. Sonny Bal

B. Sonny Bal, M.D.

Chief Executive Officer and President

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated:

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ B. Sonny Bal</u> B. Sonny Bal, M.D.	Chief Executive Officer and Director (Principal Executive Officer and Principal Financial Officer)	May 1, 2018
* <u>David W. Truetzel</u>	Director	May 1, 2018
* <u>Jeffrey S. White</u>	Director	May 1, 2018
* <u>Eric A. Stookey</u>	Director	May 1, 2018
* By: <u>/s/ B. Sonny Bal</u> B. Sonny Bal, M.D. Attorney-in-Fact		



**12,500 UNITS  
EACH CONSISTING OF  
ONE SHARE OF SERIES B PREFERRED STOCK AND [ ]  
WARRANTS TO PURCHASE ONE SHARE OF COMMON STOCK**

**AMEDICA CORPORATION**

**UNDERWRITING AGREEMENT**

[ ], 2018

Maxim Group LLC  
As the Representative of the  
Several underwriters, if any, named in Schedule I hereto  
405 Lexington Avenue  
New York, New York 10174

Ladies and Gentlemen:

The undersigned, Amedica Corporation, a Delaware corporation (collectively with its subsidiaries and affiliates, including, without limitation, all entities disclosed or described in the Registration Statement as being subsidiaries or affiliates of Amedica Corporation, the "Company"), hereby confirms its agreement (this "Agreement") with the several underwriters (such underwriters, including the Representative (as defined below), the "Underwriters" and each an "Underwriter") named in Schedule I hereto for whom Maxim Group LLC is acting as representative to the several Underwriters (the "Representative" and if there are no Underwriters other than the Representative, references to multiple Underwriters shall be disregarded and the term Representative as used herein shall have the same meaning as Underwriter) for the purchase and sale of an aggregate of 12,500 Closing Units consisting of one share of the Company's Preferred Stock and [ ] Warrants to purchase one share of the Company's Common Stock on the terms and conditions set forth herein.

It is understood that the several Underwriters are to make a public offering of the Units as soon as the Representative deems it advisable to do so. The Units are to be offered to the public at the public offering price set forth in the Prospectus.

It is further understood that you will act as the Representative for the Underwriters in the offering and sale of the Closing Units in accordance with this Agreement.

---

**ARTICLE I.  
DEFINITIONS**

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms have the meanings set forth in this Section 1.1:

“Action” shall have the meaning ascribed to such term in Section 3.1(k).

“Affiliate” means with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with such Person as such terms are used in and construed under Rule 405 under the Securities Act.

“American Stock Transfer” means American Stock Transfer & Trust Company, LLC, a New York limited liability company, with offices located at [            ].

“Benefit Arrangements” shall have the meaning ascribed to such term in Section 3.1(nn).

“Board of Directors” means the board of directors of the Company.

“Business Day” means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

“Certificate of Designation” means a certificate of designation in the form of Exhibit A attached hereto, setting forth the designations, preferences and relative and other special rights of the Preferred Stock.

“Closing” means the closing of the purchase and sale of the Closing Units pursuant to Section 2.1.

“Closing Conversion Shares” means the shares of Common Stock issuable upon conversion of the Closing Preferred Shares.

“Closing Date” means the hour and the date of delivery and payment for the Closing Units which shall occur at 10:00 a.m. (New York City time) on the second (third, if the pricing occurs after 4:30 pm Eastern time on any given day) Trading Day following the date hereof or at such earlier time as shall be agreed upon by the Representative and the Company.

“Closing Preferred Shares” shall have the meaning ascribed to such term in Section 2.1(a)(i).

“Closing Purchase Price” shall have the meaning ascribed to such term in Section 2.1(b), which aggregate purchase price shall be net of underwriting discounts and commissions.

“Closing Units” shall have the meaning ascribed to such term in Section 2.1.

“Closing Warrant Shares” means the shares of Common Stock issuable upon exercise of the Closing Warrants.

“Closing Warrants” shall have the meaning ascribed to such term in Section 2.1(a)(ii).



“Code” shall have the meaning ascribed to such term in Section 3.1(nn).

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$.01 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Company Auditors” means Tanner LLC and BDO USA, LLP, with offices located at Key Bank Tower at City Creek, 36 S State Street, Ste 600, Salt Lake City, Utah 84111-1400 and 299 South Main, 10th Floor, Salt Lake City, UT 84111, respectively.

“Company Counsel” means Dorsey & Whitney LLP, with offices located at 136 South Main Street, Suite 1000, Salt Lake City, UT 84101-1685.

“Company IP Counsel” means Polsinelli PC, One E. Washington St., Ste. 1200, Phoenix, AZ 85004.

“Contributing Party” shall have the meaning ascribed to such term in Section 6.4(b).

“Conversion Shares” means the Closing Conversion Shares and the Underwriters’ Closing Shares.

“Disclosure Schedules” means the Disclosure Schedules of the Company delivered concurrently herewith.

“Effective Date” means the date and time as of which the Registration Statement, or the most recent post-effective amendment thereto, became effective, or is deemed to have become effective by the Commission, in accordance with the rules and regulations under the Securities Act.

“EGS” means Ellenoff Grossman & Schole LLP, with offices located at 1345 Avenue of the Americas, New York, New York 10105.

“Employee Plans” shall have the meaning ascribed to it in Section 3.1(nn).

“ERISA” shall have the meaning ascribed to it in Section 3.1(nn).

“ERISA Affiliate” shall have the meaning ascribed to it in Section 3.1(nn).

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

“Execution Date” shall mean the date on which the parties execute and enter into this Agreement.

“Exempt Issuance” means the issuance of, securities upon the exercise or exchange of or conversion of any Securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of this Agreement, other than any outstanding Common Stock Equivalents issued to any party to a Lock-Up Agreement, but including any outstanding Common Stock Equivalents issued to any other employee, officer or director of the Company pursuant to any stock or option plan or arrangement, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities. An Exempt Issuance shall not include any Variable Rate Transaction.

“FCPA” means the Foreign Corrupt Practices Act of 1977, as amended.

“FINRA” means the Financial Industry Regulatory Authority.

“GAAP” shall have the meaning ascribed to such term in Section 3.1(i).

“Indebtedness” means (a) any liabilities for borrowed money or amounts owed in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (b) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company’s consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (c) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP.

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3.1(p).

“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

“Lock-Up Agreements” shall mean the lock-up agreements, in the form of Exhibit B attached hereto, delivered on the date hereof by each of the Company’s officers and directors holding Common Stock or Common Stock Equivalents and each holder of Common Stock known to the Company holding, , more than 5% of the Company’s issued and outstanding Common Stock, each such lock-up party being listed on Schedule II hereto.

“Material Adverse Effect” means (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole or (iii) a material adverse effect on the Company’s ability to perform in any material respect on a timely basis its obligations under any Transaction Document.

“Material Permit” shall have the meaning ascribed to such term in Section 3.1(n).

“Offering” shall have the meaning ascribed to such term in Section 2.1(c).

“Per Unit Purchase Price” shall have the meaning ascribed to such term in Section 2.1(b).

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Preferred Stock” means the Series B Preferred Stock of the Company, par value \$.01 per share.

“Preferred Stock Agent” means American Stock Transfer, and any successor preferred stock agent of the Company.

“Preliminary Prospectus” means, if any, any preliminary prospectus relating to the Securities, included in the Registration Statement or filed with the Commission pursuant to Rule 424(b).

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the final prospectus filed for the Registration Statement with respect to the Securities.

“Prospectus Supplement” means, if any, any supplement to the Prospectus complying with Rule 424(b) of the Securities Act that is filed with the Commission.

“Registration Statement” means, collectively, the various parts of the registration statement prepared by the Company on Form S-1 (File No. 333-223032) with respect to the Securities, as amended as of the date hereof, including the Prospectus and Prospectus Supplement, if any, the Preliminary Prospectus, if any, and all information and exhibits filed with or incorporated by reference into such registration statement.

“Required Approvals” shall have the meaning ascribed to such term in Section 3.1(e).

“Right of Participation” shall have the meaning ascribed to such term in Section 4.22.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“SEC Reports” shall have the meaning ascribed to such term in Section 3.1(i).

“Securities” means the Closing Units, the Closing Preferred Shares, the Closing Warrants, the Closing Conversion Shares, the Closing Warrant Shares and the Underwriters’ Securities.

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

“Subsidiary” means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange (or any successors to any of the foregoing).

“Transaction Documents” means this Agreement, the Certificate of Designation, the Closing Warrants, the Warrant Agreement, the Underwriters’ Unit Warrant, the Underwriters’ Warrant, the Lock-Up Agreements and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Transfer Agent” means American Stock Transfer.

“Underwriters’ Conversion Shares” shall have the meaning ascribed to it in Section 2.1(d).

“Underwriters’ Preferred Shares” shall have the meaning ascribed to it in Section 2.1(d).

“Underwriters’ Securities” shall have the meaning ascribed to it in Section 2.1(d).

“Underwriters’ Unit Warrants” shall have the meaning ascribed to it in Section 2.1(d).

“Underwriters’ Warrants” shall have the meaning ascribed to it in Section 2.1(d).

“Underwriters’ Warrant Shares” shall have the meaning ascribed to it in Section 2.1(d).

“Units” means the Closing Units, each Unit representing one share of Preferred Stock and [ ] Warrants to purchase one share of Common Stock.

“Variable Rate Transaction” shall have the meaning ascribed to it in Section 4.19(b).

“Warrants” means, collectively, the Closing Warrants and the Underwriters’ Warrants.

“Warrant Agent” means American Stock Transfer, and any successor warrant agent of the Company.

“Warrant Agreement” means the agreement that the Company entered into with the Warrant Agent, effective [ ], pursuant to which the Warrant Agent will act as the Company’s warrant agent for the Warrants, in the form of Exhibit C attached hereto.

“Warrant Shares” means the Closing Warrant Shares and the Underwriters’ Warrant Shares.

## ARTICLE II.

### PURCHASE AND SALE

#### 2.1 Closing.

(a) Upon the terms and subject to the conditions set forth herein, the Company agrees to sell in the aggregate 12,500 Units with each Unit representing one share of Preferred Stock and Warrants to purchase one share of Common Stock, and each Underwriter agrees to purchase, severally and not jointly, at the Closing, the number of Units (the “Closing Units”) set forth opposite the name of such Underwriter on Schedule I hereof which shall consist of:

(i) the number of shares of Preferred Stock (the “Closing Preferred Shares”) set forth opposite the name of such Underwriter on Schedule I hereof, which Closing Preferred Shares shall be convertible as set forth in the Preferred Stock; and

(ii) Warrants to purchase up to the number of shares of Common Stock set forth opposite the name of such Underwriter on Schedule I hereof (the “Closing Warrants”), which Closing Warrants shall be excisable as described in such warrants. The Closing Warrants shall be substantially in the form of Exhibit D hereto.

(b) The aggregate purchase price for the Closing Units shall equal the amount set forth opposite the name of such Underwriter on Schedule I hereto (the “Closing Purchase Price”). Such Closing Purchase Price shall be determined by multiplying the number of Closing Units purchased by each Underwriter by a per unit purchase price equal to \$1,000, less underwriting discounts and commissions of seven percent (7%) (such per unit purchase price, net of the seven percent (7%) underwriting discounts and commissions, the “Per Unit Purchase Price”).

(c) On the Closing Date, each Underwriter shall deliver or cause to be delivered to the Company, via wire transfer, immediately available funds equal to such Underwriter’s Closing Purchase Price and the Company shall deliver to, or as directed by, such Underwriter its respective Closing Preferred Shares and Closing Warrants and the Company shall deliver the other items required pursuant to Section 2.3 deliverable at the Closing. Upon satisfaction of the covenants and conditions set forth in Sections 2.3 and 2.4, the Closing shall occur at the offices of EGS or such other location as the Company and Representative shall mutually agree. The Units are to be offered to the public at the offering price set forth on the cover page of the Prospectus (the “Offering”).

(d) On the Closing Date, the Company hereby agrees to issue to the Underwriters (and/or their respective permitted designees) on the Closing Date, Warrants to purchase an aggregate of four percent (4%) of the Units (the “Underwriters’ Unit Warrants”) sold in the Offering. The Underwriters’ Warrants shall be substantially in the form of Exhibit E hereto and shall be exercisable, in whole or in part, commencing 180 days after the Effective Date and expiring on the five-year anniversary of the Effective Date, at an initial exercise price of \$1,100 per unit, which is equal to one hundred and ten percent (110%) of the offering price of the Units, subject to adjustment as provided in the Underwriters’ Unit Warrants. The Underwriters’ Unit Warrants, the [ ] shares of Preferred Stock underlying the Underwriters’ Unit Warrants (the “Underwriters’ Preferred Shares”), the [ ] warrants to purchase shares of Common Stock underlying the Underwriters’ Unit Warrant (the “Underwriters’ Warrants”), the shares of Common Stock issuable upon conversion of the Underwriters’ Preferred Shares (the “Underwriters’ Conversion Shares”) and the shares of Common Stock issuable upon exercise of the Underwriters’ Warrants (the “Underwriters’ Warrant Shares”) are hereinafter referred to collectively as the “Underwriters’ Securities.”

2.2 Reserved.

2.3 Deliveries. The Company shall deliver or cause to be delivered to each Underwriter (if applicable) the following:

(i) At the Closing Date, the Closing Preferred Shares which shares shall be delivered via The Depository Trust Company Deposit or Withdrawal at Custodian system for the accounts of the several Underwriters;

(ii) At the Closing Date, the Closing Warrants which such warrants shall be delivered via The Depository Trust Company Deposit or Withdrawal at Custodian system for the accounts of the several Underwriters;

(iii) At the Closing Date, to the Representative, the Underwriters' Unit Warrants;

(iv) At the Closing Date, a legal opinion of Company Counsel addressed to the Underwriters, including, without limitation, a negative assurance letter, in form and substance reasonably satisfactory to the Representative and previously agreed to;

(v) At the Closing Date, a legal opinion of Company IP Counsel addressed to the Underwriters, including, without limitation, a negative assurance letter, in form and substance reasonably satisfactory to the Representative and previously agreed to;

(vi) Contemporaneously herewith, a cold comfort letter, addressed to the Underwriters and in form and substance reasonably satisfactory in all material respects to the Representative from the Company Auditors dated, respectively, as of the date of this Agreement and a bring-down letter dated as of the Closing Date;

(vii) At the Closing Date the duly executed and delivered Officer's Certificate, substantially in the form required by Exhibit F attached hereto;

(viii) At the Closing Date, the duly executed and delivered Secretary's Certificate, substantially in the form required by Exhibit G attached hereto;

(ix) Contemporaneously herewith, the duly executed and delivered Warrant Agreement;

(x) Contemporaneously herewith, evidence reasonable satisfactory to the Representative and the Representative's counsel that the Preferred Stock Agent has agreed to act as the Preferred Stock Agent with respect to the Preferred Stock;

(xi) Contemporaneously herewith, the duly executed and delivered Lock-Up Agreements;

(xii) Contemporaneously herewith, the duly executed and delivered Officer's Certificate regarding the Company's Intellectual Property Rights in the form agreed to by the parties signatory hereto; and

(xiii) Such other certificates, opinions or documents as the Representative and Representative's Counsel may have reasonably requested;

2.4 Closing Conditions. The respective obligations of each Underwriter hereunder in connection with the Closing are subject to the following conditions being met or waived by the Representative:

(i) the accuracy in all material respects when made and on the date in question (other than representations and warranties of the Company already qualified by materiality, which shall be true and correct in all material respects) of the representations and warranties of the Company contained herein (unless as of a specific date therein);

(ii) all obligations, covenants and agreements of the Company required to be performed at or prior to the date in question shall have been performed;

(iii) the delivery by the Company of the items set forth in Section 2.3 of this Agreement;

(iv) evidence of the filing of the Certificate of Designation with respect to the Preferred Stock with the State of Delaware

(v) the Registration Statement shall be effective on the date of this Agreement and on the Closing Date no stop order suspending the effectiveness of the Registration Statement shall have been issued and no proceedings for that purpose shall have been instituted or shall be pending or contemplated by the Commission and any request on the part of the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representative;

(vi) by the Execution Date, FINRA shall have raised no objections as to the amount of compensation allowable or payable to the Underwriters and terms and arrangements for the Offering as described in the Registration Statement;

(vii) an application with respect to the listing of the Closing Conversion Shares, the Underwriters' Conversion Shares, the Closing Warrant Shares and the Underwriters' Warrant Shares on the Trading Market has been filed and the Trading Market has in writing provided that it has no further comments with respect to such application and listing; and

(viii) prior to and on the Closing Date: (i) there shall have been no material adverse change or development involving a prospective material adverse change in the condition or the business activities, financial or otherwise, of the Company from the latest dates as of which such condition is set forth in the Registration Statement and Prospectus; (ii) no action, suit or proceeding, at law or in equity, shall have been pending or threatened against the Company or any Affiliate of the Company before or by any court or federal or state commission, board or other administrative agency wherein an unfavorable decision, ruling or finding may materially adversely affect the business, operations or financial condition or income of the Company, except as set forth in the Registration Statement and Prospectus; (iii) no stop order shall have been issued under the Securities Act and no proceedings therefor shall have been initiated or threatened by the Commission; (iv) the Company has not incurred any material liabilities or obligations, direct or contingent, nor has it entered into any material transactions not in the ordinary course of business, other than pursuant to this Agreement and the transactions referred to herein; (v) the Company has not paid or declared any dividends or other distributions of any kind on any class of its capital stock; (vi) the Company has not altered its method of accounting; and (vii) the Registration Statement and the Prospectus and any amendments or supplements thereto shall contain all material statements which are required to be stated therein in accordance with the Securities Act and the rules and regulations thereunder and shall conform in all material respects to the requirements of the Securities Act and the rules and regulations thereunder, and neither the Registration Statement nor the Prospectus nor any amendment or supplement thereto shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.



**ARTICLE III.  
REPRESENTATIONS AND WARRANTIES**

3 . 1 Representations and Warranties of the Company. Except as set forth in the Disclosure Schedules, which Disclosure Schedules shall be deemed a part hereof and shall qualify any representation or otherwise made herein to the extent of the disclosure contained in the corresponding section of the Disclosure Schedules, the Company represents and warrants to the Underwriters as of the Execution Date, and, as of the Closing Date, as follows:

(a) Subsidiaries. All of the direct and indirect Subsidiaries of the Company are set forth in the Registration Statement. The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities. If the Company has no Subsidiaries, all other references to the Subsidiaries or any of them in the Transaction Documents shall be disregarded.

( b ) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in a Material Adverse Effect and no Proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

( c ) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents to which it is a party and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's stockholders in connection herewith or therewith other than in connection with the Required Approvals. This Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

( d ) No Conflicts. The execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

( e ) Filings, Consents and Approvals. Except as set forth on Schedule 3.1(e) of the Disclosure Schedules, the Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filing with the Commission of the Prospectus, (ii) such filings as are required to be made under applicable state securities laws, (iii) such as are required to be obtained or made under applicable rules of FINRA and The Nasdaq Stock Market, and (iv) such as have been obtained, given or made as of the date hereof (collectively, the "Required Approvals").

( f ) Registration Statement. The Company has filed with the Commission the Registration Statement, including any related Preliminary Prospectus or Prospectuses, for the registration of the Securities under the Securities Act, which Registration Statement has been prepared by the Company in all material respects in conformity with the requirements of the Securities Act and the rules and regulations of the Commission under the Securities Act and was declared effective under the Securities Act. Copies of such registration statement and of each amendment thereto, if any, including the related preliminary prospectuses, heretofore filed by the Company with the Commission have been delivered to the Underwriters. The term “Registration Statement” means such registration statement on Form S-1, as amended, as of the relevant Effective Date, including financial statements, all exhibits and any information deemed to be included or incorporated by reference therein, including any information deemed to be included pursuant to Rule 430A or Rule 430B of the Securities Act and the rules and regulations thereunder, as applicable. If the Company files a registration statement to register a portion of the Securities and relies on Rule 462(b) of the Securities Act and the rules and regulations thereunder for such registration statement to become effective upon filing with the Commission (the “Rule 462 Registration Statement”), then any reference to the “Registration Statement” shall be deemed to include the Rule 462 Registration Statement, as amended from time to time. The term “Preliminary Prospectus” as used herein means a preliminary prospectus as contemplated by Rule 430 or Rule 430A of the Securities Act and the rules and regulations thereunder as included at any time as part of, or deemed to be part of or included in, the Registration Statement. The term “Prospectus” means the final prospectus in connection with this Offering as first filed with the Commission pursuant to Rule 424(b) of the Securities Act and the rules and regulations thereunder or, if no such filing is required, the form of final prospectus included in the Registration Statement at the Effective Date, except that if any revised prospectus or prospectus supplement shall be provided to the Representative by the Company for use in connection with the Securities which differs from the Prospectus (whether or not such revised prospectus or prospectus supplement is required to be filed by the Company pursuant to Rule 424(b)), the term “Prospectus” shall also refer to such revised prospectus or prospectus supplement, as the case may be, from and after the time it is first provided to the Representative for such use. Any reference herein to the terms “amend”, “amendment” or “supplement” with respect to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include: (i) the filing of any document under the Exchange Act after the Effective Date, the date of such Preliminary Prospectus or the date of the Prospectus, as the case may be, which is incorporated therein by reference, and (ii) any such document so filed. All references in this Agreement to the Registration Statement, a Preliminary Prospectus and the Prospectus, or any amendments or supplements to any of the foregoing shall be deemed to include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System (“EDGAR”). For purposes of this Agreement, “free writing prospectus” has the meaning set forth in Rule 405 under the Securities Act. The Company will not, without the prior consent of the Representative, prepare, use or refer to, any free writing prospectus.

( g ) Issuance of Securities. The Securities are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Conversion Shares, the Underwriters' Conversion Shares, the Closing Warrant Shares and the Underwriters' Warrant Shares, when issued in accordance with the terms of the Certificate of Designation, the Closing Warrants and the Underwriters' Warrants, respectively, will be validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to the Closing Preferred Shares, the Closing Warrants, the Underwriters' Preferred Shares and the Underwriters' Warrants. The holder of the Securities will not be subject to personal liability by reason of being such holders. The Securities nor any of the individual components of the Securities are and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company. All corporate action required to be taken for the authorization, issuance and sale of the Securities has been duly and validly taken. The Securities and each of the components of the Securities conform in all material respects to all statements with respect thereto contained in the Registration Statement.

(h) Capitalization. The capitalization of the Company is as set forth in the Registration Statement. In addition, Schedule 3.1(h)(i) of the Disclosure Schedules sets forth the outstanding options and warrants of the Company. Except as set forth in the Registration Statement, the Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of employee stock options under the Company's stock option plans, the issuance of shares of Common Stock to employees pursuant to the Company's employee stock purchase plans or pursuant to the conversion and/or exercise of Common Stock Equivalents outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents, except such Persons as are participating in the transactions contemplated by the Transaction Documents or who have waived such rights on or prior to the date hereof as set forth on Schedule 3.1(e) of the Disclosure Schedules. Except as a result of the purchase and sale of the Securities, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents. Except as set forth on Schedule 3.1(h) of the Disclosure Schedules, the issuance and sale of the Securities will not obligate the Company to issue shares of Common Stock or other securities to any Person (other than the Underwriters) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. The authorized shares of the Company conform in all material respects to all statements relating thereto contained in the Registration Statement and the Prospectus. The offers and sales of the Company's securities were at all relevant times either registered under the Securities Act and the applicable state securities or Blue Sky laws or, based in part on the representations and warranties of the purchasers, exempt from such registration requirements. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Securities. There are no stockholders agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company's stockholders.

( i ) SEC Reports; Financial Statements. Except as set forth on Schedule 3.1(i) of the Disclosure Schedules, the Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Prospectus and any Prospectus Supplement, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The consolidated financial statements of the Company and its consolidated Subsidiaries included in the SEC Reports, the Registration Statement, the Preliminary Prospectus and the Prospectus comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments. The agreements and documents described in the Registration Statement, the Preliminary Prospectus, the Prospectus, any Prospectus Supplement and the SEC Reports conform to the descriptions thereof contained therein and there are no agreements or other documents required by the Securities Act and the rules and regulations thereunder to be described in the Registration Statement, the Preliminary Prospectus, the Prospectus or the SEC Reports or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which it is or may be bound or affected and (i) that is referred to in the Registration Statement, the Prospectus or the SEC Reports, or (ii) is material to the Company’s business, has been duly authorized and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company and, to the Company’s knowledge, the other parties thereto, in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors’ rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefore may be brought. None of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the best of the Company’s knowledge, any other party is in default thereunder and, to the best of the Company’s knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a default thereunder. To the best of the Company’s knowledge, performance by the Company of the material provisions of such agreements or instruments will not result in a violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses, including, without limitation, those relating to environmental laws and regulations.

(j) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the Registration Statement, the Preliminary Prospectus and the Prospectus, except as specifically disclosed in the Registration Statement, (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock, (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans and (vi) no officer or director of the Company has resigned from any position with the Company. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Securities contemplated by this Agreement, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least 1 Trading Day prior to the date that this representation is made. Unless otherwise disclosed in the Registration Statement filed prior to the date hereof, the Company has not: (i) issued any securities or incurred any liability or obligation, direct or contingent, for borrowed money; or (ii) declared or paid any dividend or made any other distribution on or in respect to its capital stock.

( k ) Litigation. There is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an “Action”) which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) could, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor, to the Company’s knowledge, any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(1) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company’s or its Subsidiaries’ employees is a member of a union that relates to such employee’s relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

( m ) Compliance. Neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect.

( n ) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the Registration Statement, except where the failure to possess such permits could not reasonably be expected to result in a Material Adverse Effect (each, a "Material Permit"), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit. The disclosures in the Registration Statement concerning the effects of federal, state, local and all foreign regulation on the Company's business as currently contemplated are correct in all material respects.

( o ) Title to Assets. Except as set forth on Schedule 3.1(o) of the Disclosure Schedules, the Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title in all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (ii) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made therefor in accordance with GAAP and, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance in all material respects.



(p) Intellectual Property. The Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights as described in the Registration Statement as necessary or required for use in connection with their respective businesses and which the failure to so have could have a Material Adverse Effect (collectively, the “Intellectual Property Rights”). None of, and neither the Company nor any Subsidiary has received a notice (written or otherwise) that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within two (2) years from the date of this Agreement, except as could not reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the Registration Statement, a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as could not have or reasonably be expected to not have a Material Adverse Effect. Schedule 3.1(p) to the Disclosure Schedules sets forth any intellectual property in which the Company has granted a security interest. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(q) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost that would have a Material Adverse Effect.

( r ) Transactions With Affiliates and Employees. Except as set forth in the Registration Statement, the Preliminary Prospectus and the Prospectus, none of the officers, directors or affiliates of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from, any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(s) Sarbanes-Oxley; Internal Accounting Controls. The Company and the Subsidiaries are in compliance in all material respects with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are applicable to the Company and effective as of the date hereof and as of the Closing Date. Except as set forth on Schedule 3.1(s) of the Disclosure Schedules, the Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to provide reasonable assurance that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

(t) Certain Fees. Except as set forth in the Prospectus, no brokerage or finder's fees or commissions are or will be payable by the Company, any Subsidiary or Affiliate of the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. To the Company's knowledge, there are no other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its stockholders that may affect the Underwriters' compensation, as determined by FINRA. The Company has not made any direct or indirect payments (in cash, securities or otherwise) to: (i) any person, as a finder's fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) any FINRA member; or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the twelve months prior to the Execution Date. None of the net proceeds of the Offering will be paid by the Company to any participating FINRA member or its affiliates, except as specifically authorized herein.

(u) Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Securities will not be or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an "investment company" subject to registration under the Investment Company Act of 1940, as amended.

(v) Registration Rights. Except as set forth on Schedule 3.1(v) of the Disclosure Schedules, no Person has any right to cause the Company or any Subsidiary to effect the registration under the Securities Act of any securities of the Company or any Subsidiary.

(w) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. Except as disclosed in the Registration Statement, the Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through the Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees to the Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.

(x) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's certificate of incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable as a result of the Underwriters and the Company fulfilling their obligations or exercising their rights under the Transaction Documents.

( y ) Disclosure: 10b-5. The Registration Statement (and any further documents to be filed with the Commission) contains all exhibits and schedules as required by the Securities Act. Each of the Registration Statement and any post-effective amendment thereto, if any, at the time of its Effective Date, complied in all material respects with the Securities Act and the Exchange Act and the applicable rules and regulations under the Securities Act and did not and, as amended or supplemented, if applicable, will not, contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The preliminary (if any) and final Prospectus as of its respective date, comply in all material respects with the Securities Act and the Exchange Act and the applicable rules and regulations. The Prospectus, as amended or supplemented, did not and will not contain as of the date thereof any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The SEC Reports, when they were filed with the Commission, conformed in all material respects to the requirements of the Securities Act and the Exchange Act, as applicable, and the applicable rules and regulations, and none of such documents, when they were filed with the Commission, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein (with respect to the SEC Reports incorporated by reference in the Prospectus), in light of the circumstances under which they were made not misleading; and any further documents so filed and incorporated by reference in the Prospectus or Prospectus Supplement, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act and the applicable rules and regulations, as applicable, and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made not misleading. No post-effective amendment to the Registration Statement reflecting any facts or events arising after the date thereof which represent, individually or in the aggregate, a fundamental change in the information set forth therein is required to be filed with the Commission. There are no documents required to be filed with the Commission in connection with the transaction contemplated hereby that (x) have not been filed as required pursuant to the Securities Act or (y) will not be filed within the requisite time period. There are no contracts or other documents required to be described in the Prospectus or Prospectus Supplement, or to be filed as exhibits or schedules to the Registration Statement, which have not been described or filed as required. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement taken as a whole do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made and when made, not misleading.

(z) No Integrated Offering. Neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of any applicable shareholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

(aa) Solvency. Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Securities hereunder, (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. The SEC Reports sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments.

(bb) Tax Status. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and its Subsidiaries each (i) has made or filed all United States federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company or of any Subsidiary know of no basis for any such claim.

(cc) Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of FCPA. The Company has taken reasonable steps to ensure that its accounting controls and procedures are sufficient to cause the Company to comply in all material respects with the FCPA.

(dd) Accountants. To the knowledge and belief of the Company, (i) Tanner LLC is an independent registered public accounting firm as required by the Exchange Act, (ii) BDO USA, LLP was an independent registered public accounting firm as required by the Exchange Act at the time of their audit of the financial statements of the Company and its subsidiaries as of December 31, 2016, (iii) Tanner expressed its opinion with respect to the financial statements included in the Company's Annual Report for the fiscal year ending December 31, 2017, and (iv) BDO USA, LLP expressed its opinion with respect to the financial statements included in the Company's Annual Report for the fiscal year ending December 31, 2016. Neither of the Company Auditors have, during the periods covered by the financial statements included in the Prospectus, provided to the Company any non-audit services, as such term is used in Section 10A(g) of the Exchange Act.

(ee) FDA. As to each product subject to the jurisdiction of the U.S. Food and Drug Administration (“FDA”) under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder (“FDCA”) that is manufactured, packaged, labeled, tested, distributed, sold, and/or marketed by the Company or any of its Subsidiaries (each such product, a “Product”), such Product is being manufactured, packaged, labeled, tested, distributed, sold and/or marketed by the Company in compliance with all applicable requirements under FDCA and similar laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, labeling, advertising, record keeping and filing of reports, except where the failure to be in compliance would not have a Material Adverse Effect. There is no pending, completed or, to the Company’s knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory proceeding, charge, complaint, or investigation) against the Company or any of its Subsidiaries, and none of the Company or any of its Subsidiaries has received any notice, warning letter or other communication from the FDA or any other governmental entity, which (i) contests the premarket clearance, licensure, registration, or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the sale of, or the labeling and promotion of any Product, (ii) withdraws its approval of, requests the recall, suspension, or seizure of, or withdraws or orders the withdrawal of advertising or sales promotional materials relating to, any Product, (iii) imposes a clinical hold on any clinical investigation by the Company or any of its Subsidiaries, (iv) enjoins production at any facility of the Company or any of its Subsidiaries, (v) enters or proposes to enter into a consent decree of permanent injunction with the Company or any of its Subsidiaries, or (vi) otherwise alleges any violation of any laws, rules or regulations by the Company or any of its Subsidiaries, and which, either individually or in the aggregate, would have a Material Adverse Effect. The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA. The Company has not been informed by the FDA that the FDA will prohibit the marketing, sale, license or use in the United States of any product proposed to be developed, produced or marketed by the Company nor has the FDA expressed any concern as to approving or clearing for marketing any product being developed or proposed to be developed by the Company.

(ff) Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company’s knowledge, any director, officer, agent, employee or affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department.

(g g) U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon the Representative’s request.

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

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

(jj) D&O Questionnaires. To the Company’s knowledge, all information contained in the questionnaires completed by each of the Company’s directors and officers immediately prior to the Offering as well as in the Lock-Up Agreement provided to the Underwriters is true and correct in all material respects and the Company has not become aware of any information which would cause the information disclosed in such questionnaires become inaccurate and incorrect.

( k k ) FINRA Affiliation. No officer, director or any beneficial owner of 5% or more of the Company's shares of Common Stock or Common Stock Equivalents has any direct or indirect affiliation or association with any FINRA member (as determined in accordance with the rules and regulations of FINRA) that is participating in the Offering. Except for securities purchased on the open market, no Company Affiliate is an owner of stock or other securities of any member of FINRA. No Company Affiliate has made a subordinated loan to any member of FINRA. No proceeds from the sale of the Securities (excluding underwriting compensation as disclosed in the Registration Statement and the Prospectus) will be paid to any FINRA member, any persons associated with a FINRA member or an affiliate of a FINRA member. Except as disclosed in the Prospectus, the Company has not issued any warrants or other securities or granted any options, directly or indirectly, to the Representatives or any of the Underwriters named on Schedule I hereto within the 180-day period prior to the initial filing date of the Prospectus. Except for securities issued to the Representatives as disclosed in the Prospectus and securities sold by the Representatives on behalf of the Company, no person to whom securities of the Company have been privately issued within the 180-day period prior to the initial filing date of the Prospectus is a FINRA member, is a person associated with a FINRA member or is an affiliate of a FINRA member. No FINRA member participating in the Offering has a conflict of interest with the Company. For this purpose, a "conflict of interest" exists when a FINRA member, the parent or affiliate of a FINRA member or any person associated with a FINRA member in the aggregate beneficially own 5% or more of the Company's outstanding subordinated debt or common equity, or 5% or more of the Company's preferred equity. "FINRA member participating in the Offering" includes any associated person of a FINRA member that is participating in the Offering, any member of such associated person's immediate family and any affiliate of a FINRA member that is participating in the Offering. "Any person associated with a FINRA member" means (1) a natural person who is registered or has applied for registration under the rules of FINRA and (2) a sole proprietor, partner, officer, director, or branch manager of a FINRA member, or other natural person occupying a similar status or performing similar functions, or a natural person engaged in the investment banking or securities business who is directly or indirectly controlling or controlled by a FINRA member. When used in this Section 3.1(jj) the term "affiliate of a FINRA member" or "affiliated with a FINRA member" means an entity that controls, is controlled by or is under common control with a FINRA member. The Company will advise the Representative and EGS if it learns that any officer, director or owner of 5% or more of the Company's outstanding shares of Common Stock or Common Stock Equivalents is or becomes an affiliate or associated person of a FINRA member firm.

(ll) Officers' Certificate. Any certificate signed by any duly authorized officer of the Company and delivered to you or to EGS shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

( m m ) Board of Directors. The Board of Directors is comprised of the persons set forth under the heading of the Prospectus captioned "Management." The qualifications of the persons serving as board members and the overall composition of the Board of Directors comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder applicable to the Company and the rules of the Trading Market. At least one member of the Board of Directors qualifies as a "financial expert" as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder and the rules of the Trading Market. In addition, at least a majority of the persons serving on the Board of Directors qualify as "independent" as defined under the rules of the Trading Market.

(nn) ERISA. The Company is not a party to an “employee benefit plan,” as defined in Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), which: (i) is subject to any provision of ERISA and (ii) is or was at any time maintained, administered or contributed to by the Company or any of its ERISA Affiliates (as defined hereafter). These plans are referred to collectively herein as the “Employee Plans.” An “ERISA Affiliate” of any person or entity means any other person or entity which, together with that person or entity, could be treated as a single employer under Section 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended (the “Code”). Each Employee Plan has been maintained in material compliance with its terms and the requirements of applicable law. No Employee Plan is subject to Title IV of ERISA. The Registration Statement, Preliminary Prospectus and the Prospectus identify each employment, severance or other similar agreement, arrangement or policy and each material plan or arrangement required to be disclosed pursuant to the Rules and Regulations providing for insurance coverage (including any self-insured arrangements), workers’ compensation, disability benefits, severance benefits, supplemental unemployment benefits, vacation benefits or retirement benefits, or deferred compensation, profit-sharing, bonuses, stock options, stock appreciation rights or other forms of incentive compensation, or post-retirement insurance, compensation or benefits, which: (i) is not an Employee Plan; (ii) is entered into, maintained or contributed to, as the case may be, by the Company or any of its ERISA Affiliates; and (iii) covers any officer or director or former officer or director of the Company or any of its ERISA Affiliates. These agreements, arrangements, policies or plans are referred to collectively as “Benefit Arrangements.” Each Benefit Arrangement has been maintained in material compliance with its terms and with the requirements of applicable law. Except as disclosed in the Registration Statement, Preliminary Prospectus and the Prospectus, there is no liability in respect of post-retirement health and medical benefits for retired employees of the Company or any of its ERISA Affiliates, other than medical benefits required to be continued under applicable law. No “prohibited transaction” (as defined in either Section 406 of ERISA or Section 4975 of the Code) has occurred with respect to any Employee Plan; and each Employee Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and nothing has occurred, whether by action or by failure to act, which could cause the loss of such qualification.

#### ARTICLE IV.

##### OTHER AGREEMENTS OF THE PARTIES

4.1 Amendments to Registration Statement. The Company has delivered, or will as promptly as practicable deliver, to the Underwriters complete conformed copies of the Registration Statement and of each consent and certificate of experts, as applicable, filed as a part thereof, and conformed copies of the Registration Statement (without exhibits), the Prospectus and any Prospectus Supplement, as amended or supplemented, in such quantities and at such places as an Underwriter reasonably requests. Neither the Company nor any of its directors and officers has distributed and none of them will distribute, prior to the Closing Date, any offering material in connection with the offering and sale of the Units other than the Prospectus, any Prospectus Supplements, the Registration Statement, and copies of the documents incorporated by reference therein. The Company shall not file any such amendment or supplement to which the Representative shall reasonably object in writing.

##### 4.2 Federal Securities Laws.

(a) Compliance. During the time when a Prospectus is required to be delivered under the Securities Act, the Company will use its best efforts to comply with all requirements imposed upon it by the Securities Act and the rules and regulations thereunder and the Exchange Act and the rules and regulations thereunder, as from time to time in force, so far as necessary to permit the continuance of sales of or dealings in the Securities in accordance with the provisions hereof and the Prospectus. If at any time when a Prospectus relating to the Securities is required to be delivered under the Securities Act, any event shall have occurred as a result of which, in the opinion of counsel for the Company or counsel for the Underwriters, the Prospectus, as then amended or supplemented, includes an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, or if it is necessary at any time to amend the Prospectus to comply with the Securities Act, the Company will notify the Underwriters promptly (or if such opinion is of counsel for the Underwriters, the Underwriters shall promptly notify the Company, or the counsel for the Underwriters shall promptly notify counsel for the Company) and prepare and file with the Commission, subject to Section 4.1 hereof, an appropriate amendment or supplement in accordance with Section 10 of the Securities Act.



( b ) Exchange Act Registration. For a period of three years from the Execution Date, the Company will use its reasonable best efforts to maintain the registration of the Common Stock under the Exchange Act. The Company will not deregister the Common Stock under the Exchange Act without the prior written consent of the Representative (except in connection with, and subject to the exercise of fiduciary duties of the Board of Directors, an acquisition, merger, or similar transaction of the Company in which the Company ceases to exist as an independent entity, approved by the Company's Board of Directors).

( c ) Free Writing Prospectuses. The Company represents and agrees that it has not made and will not make any offer relating to the Securities that would constitute an issuer free writing prospectus, as defined in Rule 433 of the rules and regulations under the Securities Act, without the prior written consent of the Representative. Any such free writing prospectus consented to by the Representative is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company represents that it will treat each Permitted Free Writing Prospectus as an "issuer free writing prospectus" as defined in rule and regulations under the Securities Act, and has complied and will comply with the applicable requirements of Rule 433 of the Securities Act, including timely Commission filing where required, legending and record keeping. The Representative shall not distribute any free writing prospectus without the consent of the Company.

4.3 Delivery to the Underwriters of Prospectuses. The Company will deliver to the Underwriters, without charge, from time to time during the period when the Prospectus is required to be delivered under the Securities Act or the Exchange Act such number of copies of each Prospectus as the Underwriters may reasonably request and, as soon as the Registration Statement or any amendment or supplement thereto becomes effective, deliver to you all post-effective amendments thereto.

4 . 4 Effectiveness and Events Requiring Notice to the Underwriters. The Company will use its best efforts to cause the Registration Statement to remain effective with a current prospectus until the latest of (a) nine (9) months from the Execution Date, (b) the date on which the Closing Warrants are no longer outstanding, (c) the date on which the Closing Preferred Shares are no longer outstanding, (d) the date on which the Underwriters' Unit Warrants are no longer outstanding, (e) the date on which the Underwriters' Preferred Shares are no longer outstanding and (f) the date on which the Underwriters' Warrants are no longer outstanding, and will notify the Underwriters promptly and confirm the notice in writing: (i) of the effectiveness of the Registration Statement and any amendment thereto; (ii) of the issuance by the Commission of any stop order or of the initiation, or the threatening, of any proceeding for that purpose; (iii) of the issuance by any state securities commission of any proceedings for the suspension of the qualification of the Securities for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose; (iv) of the mailing and delivery to the Commission for filing of any amendment or supplement to the Registration Statement or Prospectus under the Securities Act in respect of the Securities; (v) of the receipt of any comments or request for any additional information from the Commission; and (vi) of the happening of any event during the period described in this Section 4.4 that, in the judgment of the Company, makes any statement of a material fact made in the Registration Statement, the Prospectus or any Prospectus Supplement untrue or that requires the making of any changes in the Registration Statement, the Prospectus or any Prospectus Supplement in order to make the statements therein, in light of the circumstances under which they were made, not misleading. If the Commission or any state securities commission shall enter a stop order or suspend such qualification at any time, the Company will make commercially reasonable efforts to obtain promptly the lifting of such order.

4.5 Review of Financial Statements. For a period of five (5) years from the Execution Date, the Company, at its expense, shall cause its regularly engaged independent registered public accountants to review (but not audit) the Company's financial statements for each of the first three fiscal quarters prior to the announcement of quarterly financial information.

4.6 Reports to the Underwriters; Expenses.

(a) For a period of two years from the Execution Date, the Company will furnish to the Underwriters copies of such financial statements and other periodic and special reports as the Company from time to time furnishes generally to holders of any class of its securities and also promptly furnish to the Underwriters: (i) a copy of each periodic report the Company shall be required to file with the Commission; (ii) a copy of every press release and every news item and article with respect to the Company or its affairs which was released by the Company; (iii) a copy of each Form 8-K prepared and filed by the Company; (iv) a copy of each registration statement filed by the Company under the Securities Act; (v) such additional documents and information with respect to the Company and the affairs of any future Subsidiaries of the Company as the Representative may from time to time reasonably request; provided that the Underwriters shall each sign, if requested by the Company, a Regulation FD compliant confidentiality agreement which is reasonably acceptable to the Representative in connection with such Underwriter's receipt of such information. Documents filed with the Commission pursuant to its EDGAR system, or, with respect to (ii) above, pursuant to any other Regulation FD compliant method, shall be deemed to have been delivered to the Underwriters pursuant to this Section.

(b) Transfer Sheets. For a period of two (2) year from the Execution Date, the Company shall retain the Transfer Agent or a transfer and registrar agent acceptable to the Representative and will furnish to the Underwriters at the Company's sole cost and expense such transfer sheets of the Company's securities as an Underwriter may reasonably request, including the monthly consolidated transfer sheets of the Transfer Agent and the DTC.

(c) Trading Reports. During such time as the Closing Conversion Shares, the Underwriters' Conversion Shares, the Closing Warrant Shares and the Underwriters' Warrant Shares are listed on the Trading Market, the Company shall provide to the Underwriters, at the Company's expense, such reports published by the Trading Market relating to price and trading of such securities, as the Underwriters shall reasonably request.

(d) General Expenses Related to the Offering. The Company hereby agrees to pay on the Closing Date, to the extent not paid at the Closing Date, all expenses incident to the performance of the obligations of the Company under this Agreement, including, but not limited to: (a) all filing fees and communication expenses relating to the registration of the Securities to be sold in the Offering with the Commission; (b) all FINRA Public Offering Filing System fees associated with the review of the Offering by FINRA; all fees and expenses relating to the listing of the Closing Warrant Shares, the Underwriters' Warrant Shares, the Closing Conversion Shares and the Underwriters' Conversion Shares, on the Trading Market and such other stock exchanges as the Company and the Representative together determine; (c) all fees, expenses and disbursements relating to the registration or qualification of such Securities under the "blue sky" securities laws of such states and other foreign jurisdictions as the Representative may reasonably designate (including without limitation, all filing and registration fees); (d) the costs of all mailing and printing of the underwriting documents (including, without limitation, the Underwriting Agreement, any Blue Sky Surveys and, if appropriate, any Agreement Among Underwriters, any agreements with Selected Dealers' Agreement, Underwriters' Questionnaire and Power of Attorney), Registration Statements, Prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final Prospectuses as the Representative may reasonably deem necessary; (e) the costs and expenses of the Company's public relations firm; (f) the costs of preparing, printing and delivering the Securities; (g) fees and expenses of the Transfer Agent for the Common Stock, the Warrant Agent for the Closing Warrant, the Underwriters' Warrant and Underwriters' Unit Warrant and the Preferred Stock Agent for the Preferred Stock (including, without limitation, any fees required for same-day processing of any instruction letter delivered by the Company); (h) stock transfer and/or stamp taxes, if any, payable upon the transfer of securities from the Company to the Underwriters; (i) the fees and expenses of the Company's accountants; (j) the fees and expenses of the Company's legal counsel and other agents and representatives; (k) the Underwriters' costs of mailing prospectuses to prospective investors; (l) the costs associated with advertising the Offering in the national editions of the Wall Street Journal and New York Times after the Closing Date, (m) fees and expenses of EGS; (n) any fees that may be payable to other investment banks or broker dealers related to this Offering and (o) all other fees, expenses and disbursements of the Representative relating to this Offering. The Underwriters may also deduct from the net proceeds of the Offering payable to the Company on the Closing Date, the expenses set forth herein to be paid by the Company to the Underwriters; provided, however, that all such costs and expenses pursuant to this Section 4.6(d) and otherwise which are incurred by the Underwriters shall not exceed \$100,000 in the aggregate.

4.7 Application of Net Proceeds. The Company will apply the net proceeds from the Offering received by it in a manner consistent with the application described under the caption “Use of Proceeds” in the Prospectus.

4.8 Delivery of Earnings Statements to Security Holders. The Company will make generally available to its security holders as soon as practicable, but not later than the first day of the fifteenth full calendar month following the Execution Date, an earnings statement (which need not be certified by independent public or independent certified public accountants unless required by the Securities Act or the Rules and Regulations under the Securities Act, but which shall satisfy the provisions of Rule 158(a) under Section 11(a) of the Securities Act) covering a period of at least twelve consecutive months beginning after the Execution Date.

4.9 Stabilization. Neither the Company, nor, to its knowledge, any of its employees, directors or shareholders (without the consent of the Representative) has taken or will take, directly or indirectly, any action designed to or that has constituted or that might reasonably be expected to cause or result in, under the Exchange Act, or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities or any of the components of the Securities.

4.10 Internal Controls. The Company will maintain a system of internal accounting controls sufficient to provide reasonable assurances that: (i) transactions are executed in accordance with management’s general or specific authorization; (ii) transactions are recorded as necessary in order to permit preparation of financial statements in accordance with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management’s general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

4.11 Accountants. For a period of three (3) years from the Execution Date, the Company shall continue to retain a nationally recognized independent certified public accounting firm. The Underwriters acknowledge that the Company Auditors are acceptable to the Underwriters.

4.12 FINRA. The Company shall advise the Underwriters (who shall make an appropriate filing with FINRA) if it is aware that any officer, director, 5% or greater shareholder of the Company or Person that received the Company’s unregistered equity securities in the past 180 days is or becomes an affiliate or associated person of a FINRA member firm prior to the earlier of the termination of this Agreement or the conclusion of the distribution of the Offering.

4.13 No Fiduciary Duties. The Company acknowledges and agrees that the Underwriters' responsibility to the Company is solely contractual and commercial in nature, based on arms-length negotiations and that neither the Underwriters nor their affiliates or any Selected Dealer shall be deemed to be acting in a fiduciary capacity, or otherwise owes any fiduciary duty to the Company or any of its affiliates in connection with the Offering and the other transactions contemplated by this Agreement. Notwithstanding anything in this Agreement to the contrary, the Company acknowledges that the Underwriters may have financial interests in the success of the Offering that are not limited to the difference between the price to the public and the purchase price paid to the Company by the Underwriters for the shares and the Underwriters have no obligation to disclose, or account to the Company for, any of such additional financial interests. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Underwriters with respect to any breach or alleged breach of fiduciary duty.

4.14 Securities Laws Disclosure; Publicity. By 9:00 AM (New York City time) on the date hereof (if executed prior to 9:00 a.m. on the date hereof) or by 9:00 a.m. (New York City time) on the day following the date hereof if executed after 9:00 a.m.), the Company shall issue a press release disclosing the material terms of the Offering. The Company and the Representative shall consult with each other in issuing any other press releases with respect to the Offering, and neither the Company nor any Underwriter shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of such Underwriter, or without the prior consent of such Underwriter, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law, in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. The Company will not issue press releases or engage in any other publicity, without the Representative's prior written consent, for a period ending at 5:00 p.m. (New York City time) on the first business day following the 40th day following the Closing Date, other than normal and customary releases issued in the ordinary course of the Company's business.

4.15 Board Composition and Board Designations. The Company shall ensure that: (i) the qualifications of the persons serving as board members and the overall composition of the Board of Directors comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder and with the listing requirements of the Trading Market and (ii) if applicable, at least one member of the Board of Directors qualifies as a "financial expert" as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder.

4.16 Shareholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Underwriter of the Securities is an "Acquiring Person" under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company, or that any Underwriter of Securities could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Securities.

4.17 Reservation of Shares.

(a) Common Stock. As of the date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue the Closing Conversion Shares, the Closing Warrant Shares, the Underwriters' Conversion Shares and the Underwriters' Warrant Shares pursuant to any exercise or conversion of any of the Closing Preferred Shares, the Closing Warrants, the Underwriters' Unit Warrants, the Underwriters' Preferred Shares or the Underwriters' Warrants.

(b) Preferred Stock. As of the date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Preferred Stock for the purpose of enabling the Company to issue the Underwriters' Preferred Shares pursuant to any exercise of the Underwriters' Unit Warrants.

4.18 Listing of Common Stock. The Company hereby agrees to use best efforts to maintain the listing or quotation of the Common Stock on the Trading Market on which it is currently listed, and concurrently with the Closing, the Company shall apply to list or quote all of the Closing Conversion Shares, the Closing Warrant Shares, the Underwriters' Conversion Shares and the Underwriters' Warrant Shares on such Trading Market and promptly secure the listing of all of the Closing Conversion Shares, the Closing Warrant Shares, the Underwriters' Conversion Shares and the Underwriters' Warrant Shares on such Trading Market. The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the Closing Conversion Shares, the Closing Warrant Shares, the Underwriters' Conversion Shares and the Underwriters' Warrant Shares, and will take such other action as is necessary to cause all of the Closing Conversion Shares, the Closing Warrant Shares, the Underwriters' Conversion Shares and the Underwriters' Warrant Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then take all action reasonably necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules of the Trading Market.

4.19 Subsequent Equity Sales.

(a) From the date hereof until 60 days following the Closing Date, neither the Company nor any Subsidiary shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents.

(b) From the date hereof until 60 days following the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction, provided, however, from the date hereof until such time as there are no Closing Warrants, Closing Preferred Shares, Underwriters' Unit Warrants, Underwriters' Preferred Shares or Underwriters' Warrant Shares, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction that does not contain a conversion floor of at least \$ \_\_\_\_\_. "Variable Rate Transaction" means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive, additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon, and/or varies with, the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit, whereby the Company may issue securities at a future determined price. Any Underwriter shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(c) Notwithstanding the foregoing, other than the proviso contained in Section 4.19(b), this Section 4.19 shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance.

4 . 2 0 Research Independence. The Company acknowledges that each Underwriter's research analysts and research departments, if any, are required to be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and that such Underwriter's research analysts may hold and make statements or investment recommendations and/or publish research reports with respect to the Company and/or the offering that differ from the views of its investment bankers. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against such Underwriter with respect to any conflict of interest that may arise from the fact that the views expressed by their independent research analysts and research departments may be different from or inconsistent with the views or advice communicated to the Company by such Underwriter's investment banking divisions. The Company acknowledges that the Representative is a full service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short position in debt or equity securities of the Company.

4 . 2 1 Capital Changes. Until one year from the Closing Date, and other than to maintain compliance with the listing requirements of the Trading Market, the Company shall not undertake a reverse or forward stock split or reclassification of the Common Stock without the prior written consent of the Representative.

4.22 Right of Participation. The Company grants the Representative the right of first refusal ("Right of Participation") for a period of nine (9) months from the commencement of sales of the Offering to act as lead-manager for any and all future public and private equity financings of the Company or any successor to or any subsidiary of the Company. The Company shall provide written notice to Representative with terms of such offering and if Representative fails to accept in writing any such proposal for such public or private sale within 10 days after receipt of a written notice from the Company containing such proposal, then Representative will have no claim or right with respect to any such sale contained in any such notice.

4.23 Warrant Shares and Preferred Shares.

(a) Provided that the holder of a Closing Warrant or an Underwriters' Warrant, as the case may be, is not an affiliate of the Company under Rule 144 promulgated under the Securities Act, if all or any portion of a Closing Warrant or an Underwriters' Warrant, as the case may be, is exercised at a time when there is an effective registration statement to cover the issuance of the Closing Warrant Shares or the Underwriters' Warrant Shares, as the case may be, or if the Closing Warrant or Underwriters' Warrant, as the case may be, is exercised via cashless exercise at a time when such Closing Warrant Shares or Underwriters' Warrant Shares, as the case may be, would be eligible for resale under Rule 144 by a non-affiliate of the Company, the Closing Warrant Shares or Underwriters' Warrant Shares, as the case may be, issued pursuant to any such exercise shall be issued free of all restrictive legends.

(b) Provided that the holder of Preferred Stock is not an affiliate of the Company under Rule 144 promulgated under the Securities Act, if all or any portion of Preferred Stock is converted at a time when there is an effective registration statement to cover the issuance of the Closing Conversion Shares or Underwriters' Conversion Shares or if the Preferred Stock, as the case may be, is converted at a time when such Closing Conversion Shares or Underwriters' Closing Shares, as the case may be, would be eligible for resale under Rule 144 by a non-affiliate of the Company, the Closing Conversion Shares or Underwriters' Conversion Shares, as the case may be, issued pursuant to any such conversion shall be issued free of all restrictive legends.

(c) If at any time following the date hereof the Registration Statement (or any subsequent registration statement registering the sale or resale of the Securities and any component of the Securities) is not effective or is not otherwise available for the sale of the Securities and/or any of the components of the Securities, the Company shall promptly notify the holders of the Closing Warrants and/or Preferred Stock and/or Underwriters' Unit Warrants and/or Underwriters' Warrants in writing that such registration statement is not then effective and thereafter shall promptly notify such holders when the registration statement is effective again and available for the sale of the Securities and any component of the Securities (it being understood and agreed that the foregoing shall not limit the ability of the Company to issue, or any holder thereof to sell, any of the Securities and any component of the Securities in compliance with applicable federal and state securities laws and the Company hereby agrees to pay the cost of counsel designated by such holder with respect to the issuance of an opinion of counsel in connection with such transfer).



**ARTICLE V.  
DEFAULT BY UNDERWRITERS**

If on the Closing Date any Underwriter shall fail to purchase and pay for the portion of the Closing Units which such Underwriter has agreed to purchase and pay for on such date (otherwise than by reason of any default on the part of the Company), the Representative, or if the Representative is the defaulting Underwriter, the non-defaulting Underwriters, shall use their reasonable efforts to procure within 36 hours thereafter one or more of the other Underwriters, or any others, to purchase from the Company such amounts as may be agreed upon and upon the terms set forth herein, the Closing Units which the defaulting Underwriter or Underwriters failed to purchase. If during such 36 hours the Representative shall not have procured such other Underwriters, or any others, to purchase the Closing Units, agreed to be purchased by the defaulting Underwriter or Underwriters, then (a) if the aggregate number of Closing Units, with respect to which such default shall occur does not exceed 10% of the Closing Units, covered hereby, the other Underwriters shall be obligated, severally, in proportion to the respective numbers of Closing Units, which they are obligated to purchase hereunder, to purchase the Closing Units, which such defaulting Underwriter or Underwriters failed to purchase, or (b) if the aggregate number of Closing Units, with respect to which such default shall occur exceeds 10% of the Closing Units, covered hereby, the Company or the Representative will have the right to terminate this Agreement without liability on the part of the non-defaulting Underwriters or of the Company except to the extent provided in Article VI hereof. In the event of a default by any Underwriter or Underwriters, as set forth in this Article V, the applicable Closing Date may be postponed for such period, not exceeding seven days, as the Representative, or if the Representative is the defaulting Underwriter, the non-defaulting Underwriters, may determine in order that the required changes in the Prospectus or in any other documents or arrangements may be effected. The term "Underwriter" includes any person substituted for a defaulting Underwriter. Any action taken under this Section shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

## ARTICLE VI. INDEMNIFICATION

6.1 Indemnification of the Underwriters. Subject to the conditions set forth below, the Company agrees to indemnify and hold harmless the Underwriters, and each dealer selected by each Underwriter that participates in the offer and sale of the Securities (each a “Selected Dealer”) and each of their respective directors, officers and employees and each Person, if any, who controls such Underwriter or any Selected Dealer (“Controlling Person”) within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, against any and all loss, liability, claim, damage and expense whatsoever (including but not limited to any and all reasonable legal or other expenses reasonably incurred in investigating, preparing or defending against any litigation, commenced or threatened, or any claim whatsoever, whether arising out of any action between such Underwriter and the Company or between such Underwriter and any third party or otherwise) to which they or any of them may become subject under the Securities Act, the Exchange Act or any other statute or at common law or otherwise or under the laws of foreign countries, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in (i) any Preliminary Prospectus, if any, the Registration Statement or the Prospectus (as from time to time each may be amended and supplemented); (ii) any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Securities, including any “road show” or investor presentations made to investors by the Company (whether in person or electronically); or (iii) any application or other document or written communication (in this Article VI, collectively called “application”) executed by the Company or based upon written information furnished by the Company in any jurisdiction in order to qualify the Securities under the securities laws thereof or filed with the Commission, any state securities commission or agency, Trading Market or any securities exchange; or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, unless such statement or omission was made in reliance upon and in conformity with written information furnished to the Company with respect to the applicable Underwriter by or on behalf of such Underwriter expressly for use in any Preliminary Prospectus, if any, the Registration Statement or Prospectus, or any amendment or supplement thereto, or in any application, as the case may be. With respect to any untrue statement or omission or alleged untrue statement or omission made in the Preliminary Prospectus, if any, the indemnity agreement contained in this Section 6.1 shall not inure to the benefit of an Underwriter to the extent that any loss, liability, claim, damage or expense of such Underwriter results from the fact that a copy of the Prospectus was not given or sent to the Person asserting any such loss, liability, claim or damage at or prior to the written confirmation of sale of the Securities to such Person as required by the Securities Act and the rules and regulations thereunder, and if the untrue statement or omission has been corrected in the Prospectus, unless such failure to deliver the Prospectus was a result of non-compliance by the Company with its obligations under this Agreement. The Company agrees promptly to notify each Underwriter of the commencement of any litigation or proceedings against the Company or any of its officers, directors or Controlling Persons in connection with the issue and sale of the Securities or in connection with the Registration Statement or Prospectus.

6.2 Procedure. If any action is brought against an Underwriter, a Selected Dealer or a Controlling Person in respect of which indemnity may be sought against the Company pursuant to Section 6.1, such Underwriter, such Selected Dealer or Controlling Person, as the case may be, shall promptly notify the Company in writing of the institution of such action and the Company shall assume the defense of such action, including the employment and fees of counsel (subject to the reasonable approval of such Underwriter or such Selected Dealer, as the case may be) and payment of actual expenses. Such Underwriter, such Selected Dealer or Controlling Person shall have the right to employ its or their own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such Underwriter, such Selected Dealer or Controlling Person unless (i) the employment of such counsel at the expense of the Company shall have been authorized in writing by the Company in connection with the defense of such action, or (ii) the Company shall not have employed counsel to have charge of the defense of such action, or (iii) such indemnified party or parties shall have reasonably concluded that there may be defenses available to it or them which are different from or additional to those available to the Company (in which case the Company shall not have the right to direct the defense of such action on behalf of the indemnified party or parties), in any of which events the reasonable fees and expenses of not more than one additional firm of attorneys selected by such Underwriter (in addition to local counsel), Selected Dealer and/or Controlling Person shall be borne by the Company. Notwithstanding anything to the contrary contained herein, if any Underwriter, Selected Dealer or Controlling Person shall assume the defense of such action as provided above, the Company shall have the right to approve the terms of any settlement of such action which approval shall not be unreasonably withheld.

6.3 Indemnification of the Company. Each Underwriter severally and not jointly agrees to indemnify and hold harmless the Company, its directors, officers and employees and agents who control the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act against any and all loss, liability, claim, damage and expense described in the foregoing indemnity from the Company to such Underwriter, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions made in any Preliminary Prospectus, if any, the Registration Statement or Prospectus or any amendment or supplement thereto or in any application, in reliance upon, and in strict conformity with, written information furnished to the Company with respect to such Underwriter by or on behalf of such Underwriter expressly for use in such Preliminary Prospectus, if any, the Registration Statement or Prospectus or any amendment or supplement thereto or in any such application. In case any action shall be brought against the Company or any other Person so indemnified based on any Preliminary Prospectus, if any, the Registration Statement or Prospectus or any amendment or supplement thereto or any application, and in respect of which indemnity may be sought against such Underwriter, such Underwriter shall have the rights and duties given to the Company, and the Company and each other Person so indemnified shall have the rights and duties given to such Underwriter by the provisions of this Article VI. Notwithstanding the provisions of this Section 6.3, no Underwriter shall be required to indemnify the Company for any amount in excess of the underwriting discounts and commissions applicable to the Securities purchased by such Underwriter. The Underwriters' obligations in this Section 6.3 to indemnify the Company are several in proportion to their respective underwriting obligations and not joint.

6.4 Contribution.

(a) Contribution Rights. In order to provide for just and equitable contribution under the Securities Act in any case in which (i) any Person entitled to indemnification under this Article VI makes a claim for indemnification pursuant hereto but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case notwithstanding the fact that this Article VI provides for indemnification in such case, or (ii) contribution under the Securities Act, the Exchange Act or otherwise may be required on the part of any such Person in circumstances for which indemnification is provided under this Article VI, then, and in each such case, the Company and each Underwriter, severally and not jointly, shall contribute to the aggregate losses, liabilities, claims, damages and expenses of the nature contemplated by said indemnity agreement incurred by the Company and such Underwriter, as incurred, in such proportions that such Underwriter is responsible for that portion represented by the percentage that the underwriting discount appearing on the cover page of the Prospectus bears to the initial offering price appearing thereon and the Company is responsible for the balance; provided, that, no Person guilty of a fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation. For purposes of this Section, each director, officer and employee of such Underwriter or the Company, as applicable, and each Person, if any, who controls such Underwriter or the Company, as applicable, within the meaning of Section 15 of the Securities Act shall have the same rights to contribution as such Underwriter or the Company, as applicable. Notwithstanding the provisions of this Section 6.4, no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions applicable to the Securities purchased by such Underwriter. The Underwriters' obligations in this Section 6.4 to contribute are several in proportion to their respective underwriting obligations and not joint.

(b) Contribution Procedure. Within fifteen days after receipt by any party to this Agreement (or its representative) of notice of the commencement of any action, suit or proceeding, such party will, if a claim for contribution in respect thereof is to be made against another party (“contributing party”), notify the contributing party of the commencement thereof, but the failure to so notify the contributing party will not relieve it from any liability which it may have to any other party other than for contribution hereunder. In case any such action, suit or proceeding is brought against any party, and such party notifies a contributing party or its representative of the commencement thereof within the aforesaid fifteen days, the contributing party will be entitled to participate therein with the notifying party and any other contributing party similarly notified. Any such contributing party shall not be liable to any party seeking contribution on account of any settlement of any claim, action or proceeding affected by such party seeking contribution without the written consent of such contributing party. The contribution provisions contained in this Section 6.4 are intended to supersede, to the extent permitted by law, any right to contribution under the Securities Act, the Exchange Act or otherwise available.

## **ARTICLE VII. MISCELLANEOUS**

### 7.1 Termination.

(a) Termination Right. The Representative shall have the right to terminate this Agreement at any time prior to any Closing Date, (i) if any domestic or international event or act or occurrence has materially disrupted, or in its opinion will in the immediate future materially disrupt, general securities markets in the United States; or (ii) if trading on any Trading Market shall have been suspended or materially limited, or minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required by FINRA or by order of the Commission or any other government authority having jurisdiction, or (iii) if the United States shall have become involved in a new war or an increase in major hostilities, or (iv) if a banking moratorium has been declared by a New York State or federal authority, or (v) if a moratorium on foreign exchange trading has been declared which materially adversely impacts the United States securities markets, or (vi) if the Company shall have sustained a material loss by fire, flood, accident, hurricane, earthquake, theft, sabotage or other calamity or malicious act which, whether or not such loss shall have been insured, will, in the Representative’s opinion, make it inadvisable to proceed with the delivery of the Securities, or (vii) if the Company is in material breach of any of its representations, warranties or covenants hereunder, or (viii) if the Representative shall have become aware after the date hereof of such a material adverse change in the conditions of the Company, or such adverse material change in general market conditions as in the Representative’s judgment would make it impracticable to proceed with the offering, sale and/or delivery of the Securities or to enforce contracts made by the Underwriters for the sale of the Securities.

( b ) Expenses. In the event this Agreement shall be terminated pursuant to Section 7.1(a), within the time specified herein or any extensions thereof pursuant to the terms herein, the Company shall be obligated to pay to the Representative its actual and accountable out of pocket expenses related to the transactions contemplated herein then due and payable, including the fees and disbursements of EGS, up to \$100,000 (provided, however, that such expense cap in no way limits or impairs the indemnification and contribution provisions of this Agreement).

( c ) Indemnification. Notwithstanding any contrary provision contained in this Agreement, any election hereunder or any termination of this Agreement, and whether or not this Agreement is otherwise carried out, the provisions of Article VI shall not be in any way effected by such election or termination or failure to carry out the terms of this Agreement or any part hereof.

7 . 2 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, any Preliminary Prospectus, the Prospectus and any Prospectus Supplement, contain the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules. Notwithstanding anything herein to the contrary, the Engagement Agreement, dated March 29, 2018 ("Engagement Agreement"), by and between the Company and Maxim Group LLC, shall continue to be effective and the terms therein shall continue to survive and be enforceable by the Representative in accordance with its terms, provided that, in the event of a conflict between the terms of the Engagement Agreement and this Agreement, the terms of this Agreement shall prevail.

7.3 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2<sup>nd</sup>) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto.

7.4 Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Representative. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right.

7.5 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

7.6 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns.

7.7 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any action, suit or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action or proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company under Article VI, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

7.8 Survival. The representations and warranties contained herein shall survive the Closing and the delivery of the Securities.

7.9 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or “.pdf” signature page were an original thereof.

7.10 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

7.11 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, the Underwriters and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

7.12 Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

7.13 Construction. The parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and shares of Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

7.14 **WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVE FOREVER ANY RIGHT TO TRIAL BY JURY.**

*(Signature Pages Follow)*

If the foregoing correctly sets forth the understanding between the Underwriters and the Company, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement among the Company and the several Underwriters in accordance with its terms.

Very truly yours,

**AMEDICA CORPORATION**

By: \_\_\_\_\_  
Name: B. Sonny Bal  
Title: President & CEO

Address for Notice:

Address for Notice:  
1885 West 2100 Street  
Salt Lake City, UT 84119  
Attention: President

Copy to:  
Dorsey & Whitney LLP  
111 S. Main Street, Suite 2100  
Salt Lake City, UT 84111-2176  
Attention: David Marx

Accepted on the date first above written.

**MAXIM GROUP LLC**  
As the Representative of the several  
Underwriters listed on Schedule I  
By: Maxim Group LLC

By: \_\_\_\_\_  
Name: Clifford A. Teller  
Title: Executive Managing Directors, Investment Banking

Address for Notice:

405 Lexington Avenue  
New York, New York 10174  
Facsimile: (212) 895-3783  
Attention: Clifford A. Teller

Copy to:

Ellenoff Grossman & Schole LLP  
1345 Avenue of the Americas  
New York, New York 10105  
Facsimile: (212) 370-7889  
Attention: Sarah Williams



**SCHEDULE I**

Schedule of Underwriters



THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE HEREOF MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED, OR HYPOTHECATED, OR BE THE SUBJECT OF ANY HEDGING, SHORT SALE, DERIVATIVE, PUT, OR CALL TRANSACTION THAT WOULD RESULT IN THE EFFECTIVE ECONOMIC DISPOSITION OF SUCH SECURITIES BY ANY PERSON FOR A PERIOD OF ONE HUNDRED AND EIGHTY (180) DAYS IMMEDIATELY FOLLOWING THE DATE OF EFFECTIVENESS OF THE PUBLIC OFFERING OF THE COMPANY'S SECURITIES PURSUANT TO REGISTRATION STATEMENT NO.: 333-223032 AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION, EXCEPT IN ACCORDANCE WITH FINRA RULE 5110(g)(2).

UNIT PURCHASE WARRANT

FOR THE PURCHASE OF

[ ] UNITS

OF

AMEDICA CORPORATION

[ ], 2018

1. **Purchase Warrant.** This Unit Purchase Warrant (the "**Purchase Warrant**") certifies that, for value received, Maxim Partners LLC or its permitted assigns ("**Holder**") is entitled, upon the terms and subject to the conditions hereinafter set forth, on any time on or after the date that is 180 days after the effective date of the registration statement (the "**Effective Date**" or "**Commencement Date**") and on or prior to the close of business on the fifth (5<sup>th</sup>) anniversary of the Commencement Date (the "**Expiration Date**") but not thereafter, to subscribe for and purchase from Amedica Corporation ("**Company**"), in whole or in part, up to [ ] ([ ]) units ("**Units**") of the Company, each Unit consisting of one share of Series B Convertible Preferred Stock, par value \$0.01 per share (the "**Series B Preferred Stock**"), and [ ] ([ ]) warrants ("**Warrant(s)**") to purchase one share of common stock, par value \$0.01 per share (the "**Common Stock**"). The Units will not be issued or certificated. Each share of Series B Preferred Stock will have the same preferences, rights and designations as those shares issued to the purchasers in that certain public follow-on offering that initially closed on [ ], 2018 (the "**Offering**") and as set forth in the Certificate of Designations of Series B Convertible Preferred Stock filed with the Secretary of State of the State of Delaware on [ ], 2018 (the "**Certificate of Designation**"). Each Warrant will be the same as the warrants issued in the Offering. If the Expiration Date is a day on which banking institutions are authorized by law to close, then this Purchase Warrant may be exercised until the close of the next succeeding day which is not such a day in accordance with the terms herein. During the period ending on the Expiration Date, the Company agrees not to take any action that would terminate the Purchase Warrant. This Purchase Warrant is initially exercisable at \$1,100 per Unit; provided, however, that upon the occurrence of any of the events specified in Section 6 hereof, the rights granted by this Purchase Warrant, including the exercise price per Unit and the number of Units (such shares of Series B Preferred Stock and Warrants to be delivered upon exercise of this Purchase Warrant, the "**Delivered Securities**") to be received upon such exercise, shall be adjusted as therein specified. The term "**Exercise Price**" shall mean the initial exercise price or the adjusted exercise price, depending on the context.

2. **Exercise.**

2.1 **Exercise Form.** In order to exercise this Purchase Warrant, the exercise form attached hereto must be duly executed and completed and delivered to the Company, together with this Purchase Warrant and payment of the Exercise Price for the Units being purchased payable in cash or by certified check or official bank check (or cashless in accordance with Section 2.3 below). If the Purchase Warrant is not exercised at or before 5:00 p.m., New York City local time, on the Expiration Date, this Purchase Warrant shall become and be void without further force or effect, and all rights represented hereby shall cease and expire.

---

## 2.2 Intentionally Omitted.

## 2.3 Cashless Exercise.

2.3.1 Determination of Amount. In lieu of the payment of the Exercise Price multiplied by the number of Units for which this Purchase Warrant is exercisable (and in lieu of being entitled to receive shares of Series B Preferred Stock and Warrants) in the manner required by Section 2.1, and subject to Section 6.1 hereof, the Holder shall have the right (but not the obligation) to convert any exercisable but unexercised portion of this Purchase Warrant into Units ("**Cashless Exercise Right**") as follows: upon exercise of the Cashless Exercise Right, the Company shall deliver to the Holder (without payment by the Holder of any of the Exercise Price in cash) that number of Units (in the form of the Delivered Securities) equal to the number of Units to be exercised multiplied by the quotient obtained by dividing (x) the "Value" (as defined below) of the portion of the Purchase Warrant being converted by (y) the Current Market Value (as defined below). The "Value" of the portion of the Purchase Warrant being converted shall equal the remainder derived from subtracting (a) the Exercise Price from (b) the Current Market Value of a Unit. As used herein, the term "Current Market Value" per Unit at any date means: (A) in the event that the Common Stock is trading on any of the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the NYSE American, the New York Stock Exchange, OTCQB or OTCQX (each a "**Trading Market**"), the aggregate of (i) the product of (x) the Current Market Price of the Common Stock and (y) the number of shares of Common Stock underlying one share of Series B Preferred Stock included in the Units plus (ii) the remainder derived from subtracting (x) the exercise price of the Warrants multiplied by the number of shares of Common Stock issuable upon exercise of one of the Warrants underlying one Unit from (y) the product of (aa) the Current Market Price of the Common Stock multiplied by (bb) the number of shares of Common Stock underlying the Warrants included in each such Unit; or (B) in the event that Company's Common Stock is not trading on a Trading Market, the aggregate of (i) the product of (x) the Current Market Price of the Series B Preferred Stock and (y) the number of shares of Series B Preferred Stock underlying one Unit plus the aggregate of (ii) the product of (x) the Current Market Price of the Warrants and (y) the number of the Warrants included in one Unit. The "**Current Market Price**" shall mean (i) if the applicable security to which the definition relates is listed on a national securities exchange or quoted on the OTC Bulletin Board (or successor exchange), the last reported sale price of such security in the principal trading market as reported by the exchange, Nasdaq or FINRA, as the case may be, for the trading day preceding the date in question; (ii) if the security is not listed on a national securities exchange or quoted on the OTC Bulletin Board (or successor exchange), but is traded in the residual over-the-counter market, the last reported sale price for the security on for the trading day preceding the date in question for which such quotations are reported by the Pink Sheets, LLC or similar publisher of such quotations; and (iii) if the fair market value of the securities cannot be determined pursuant to clause (i) or (ii) above, such price as the Board of Directors of the Company shall determine, in good faith. In the event the Warrants have expired and are no longer exercisable, no "Value" shall be attributed to the Warrants underlying this Purchase Warrant.

2.3.2 Mechanics of Cashless Exercise. The Cashless Exercise Right may be exercised by the Holder on any business day on or after the Commencement Date and not later than the Expiration Date by delivering the Purchase Warrant with the duly executed exercise form attached hereto with the cashless exercise section completed to the Company, exercising the Cashless Exercise Right and specifying the total number of Units the Holder will purchase pursuant to such Cashless Exercise Right.

## 3. **Transfer.**

3.1 General Restrictions. The registered Holder of this Purchase Warrant, by its acceptance hereof, agrees that in compliance with FINRA Rule 5110(g) it will not sell, transfer, assign, pledge or hypothecate this Purchase Warrant (or the Delivered Securities) for a period of 180 days following the Effective Date to anyone other than (i) an underwriter or selected dealer in connection with the Offering, or (ii) a bona fide officer or partner of any such underwriter or selected dealer. On and after the 181<sup>st</sup> day following the Effective Date, transfers to others may be made subject to compliance with or exemptions from applicable securities laws. In order to make any permitted assignment, the Holder must deliver to the Company the assignment form attached hereto duly executed and completed, together with the Purchase Warrant and payment of all transfer taxes, if any, payable in connection therewith. The Company shall within five business days transfer this Purchase Warrant on the books of the Company and shall execute and deliver a new Purchase Warrant or Purchase Warrants of like tenor to the appropriate assignee(s) expressly evidencing the right to purchase the aggregate number of Units purchasable hereunder or such portion of such number as shall be contemplated by any such assignment.

#### 4. New Purchase Warrants to be Issued.

4.1 Partial Exercise or Transfer. Subject to the restrictions in Section 3 hereof, this Purchase Warrant may be exercised or assigned in whole or in part. In the event of the exercise or assignment hereof in part only, upon surrender of this Purchase Warrant for cancellation, together with the duly executed exercise or assignment form and funds sufficient to pay any Exercise Price (except to the extent that the Holder elects to exercise this Purchase Warrant by means of a cashless exercise as provided in Section 2.3 above) and/or transfer tax, the Company shall cause to be delivered to the Holder without charge a new Purchase Warrant of like tenor to this Purchase Warrant in the name of the Holder evidencing the right of the Holder to purchase the number of Units purchasable hereunder as to which this Purchase Warrant has not been exercised or assigned.

4.2 Lost Certificate. Upon receipt by the Company of evidence satisfactory to it of the loss, theft, destruction or mutilation of this Purchase Warrant and of reasonably satisfactory indemnification or the posting of a bond, the Company shall execute and deliver a new Purchase Warrant of like tenor and date. Any such new Purchase Warrant executed and delivered as a result of such loss, theft, mutilation or destruction shall constitute a substitute contractual obligation on the part of the Company.

#### 5. Registration Rights.

##### 5.1 Demand Registration.

5.1.1 Grant of Right. The Company, upon written demand (“**Initial Demand Notice**”) of the Holder(s) of at least 51% of the Purchase Warrants and/or the Delivered Securities (“**Majority Holders**”), agrees to use its best efforts to register (the “**Demand Registration**”) under the Act on one occasion, all or any portion of the shares of Common Stock issued or issuable upon conversion or exercise, as the case may be, of the Delivered Securities requested by the Majority Holders in the Initial Demand Notice (collectively, the “**Registrable Securities**”). On such occasion, the Company will use its best efforts to file a registration statement covering the Registrable Securities within sixty days after receipt of the Initial Demand Notice and use its best efforts to have such registration statement declared effective as soon as possible thereafter. The demand for registration may be made at any time during which the majority Holder holds any of the Delivered Securities or Registrable Securities. The Initial Demand Notice shall specify the number of shares of Registrable Securities proposed to be sold and the intended method(s) of distribution thereof. The Company will notify all holders of the Purchase Warrants, Delivered Securities and/or Registrable Securities of the demand within ten days from the date of the receipt of any such Initial Demand Notice. Each holder of Purchase Warrants, Delivered Securities or Registrable Securities who wishes to include all or a portion of such holder’s Registrable Securities in the Demand Registration (each such holder including shares of Registrable Securities in such registration, a “**Demanding Holder**”) shall so notify the Company within fifteen (15) days after the receipt by the holder of the notice from the Company. Upon any such request, the Demanding Holders shall be entitled to have their Registrable Securities included in the Demand Registration. The Company shall not be obligated to effect more than one (1) Demand Registration under this Section 5.1 in respect of all Registrable Securities during the five year period after the Effective Date.

5.1.2 Effective Registration. A registration will not count as a Demand Registration until the registration statement filed with the Commission with respect to such Demand Registration has been declared effective and the Company has complied with all of its obligations under this Purchase Warrant agreement with respect thereto.

5.1.3 Terms. The Company shall bear all fees and expenses attendant to registering the Registrable Securities, including the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities, but the Holders shall pay any and all underwriting commissions. The Company agrees to use its reasonable best efforts to qualify or register the Registrable Securities in such states as are reasonably requested by the Majority Holder(s); provided, however, that in no event shall the Company be required to register the Registrable Securities in a state in which such registration would cause (i) the Company to be obligated to qualify to do business in such state, or would subject the Company to taxation as a foreign corporation doing business in such jurisdiction or (ii) the principal stockholders of the Company to be obligated to escrow their shares of Common Stock of the Company. The Company shall use its best efforts to cause any registration statement filed pursuant to the demand rights granted under Section 5.1.1 to remain effective until all Registrable Securities are sold.

## 5.2 Piggy-Back Registration and Other Rights.

5.2.1 Piggy-Back Rights. If at any time during the five year period after the Effective Date in which the Purchase Warrants, Delivered Securities or Registrable Securities are outstanding, the Company proposes to file a registration statement under the Act with respect to an offering of equity securities, or securities or other obligations exercisable or exchangeable for, or convertible into, equity securities, by the Company for its own account or for stockholders of the Company for their account (or by the Company and by stockholders of the Company including, without limitation, pursuant to Section 5.1), other than a registration statement (i) filed in connection with any employee share option or other benefit plan, (ii) for an exchange offer or offering of securities solely to the Company's existing stockholders, or (iii) for a dividend reinvestment plan, then the Company shall (x) give written notice of such proposed filing to the holders of Purchase Warrants, Delivered Securities or Registrable Securities as soon as practicable but in no event less than ten (10) days before the anticipated filing date, which notice shall describe the amount and type of securities to be included in such offering, the intended method(s) of distribution, and the name of the proposed managing underwriter or underwriters, if any, of the offering, and (y) offer to the holders of Purchase Warrants, Delivered Securities and Registrable Securities in such notice the opportunity to register the sale of such number of shares of Common Stock issued or issuable upon conversion or exercise, as the case may be, of the Delivered Securities held by such holder (the "**Piggy-Back Registrable Securities**"), as such holders may request in writing within five (5) days following receipt of such notice (a "**Piggy-Back Registration**"). The Company shall cause such Piggy-Back Registrable Securities to be included in such registration and shall use its best efforts to cause the managing underwriter or underwriters of a proposed underwritten offering to permit the Piggy-Back Registrable Securities requested to be included in a Piggy-Back Registration on the same terms and conditions as any similar securities of the Company and to permit the sale or other disposition of such Piggy-Back Registrable Securities in accordance with the intended method(s) of distribution thereof. All holders of Piggy-Back Registrable Securities proposing to distribute their securities through a Piggy-Back Registration that involves an underwriter or underwriters shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such Piggy-Back Registration.

5.2.2 Reduction of Offering. If the managing underwriter or underwriters for a Demand Registration or Piggy-Back Registration that is to be an underwritten offering advises the Company and the holders of Purchase Warrant, Delivered Securities or Registrable Securities in writing that the dollar amount or number of shares of Common Stock which the Company desires to sell, taken together with Common Stock, if any, as to which registration has been demanded pursuant to written contractual arrangements with persons other than the holders of Registrable Securities and Piggy-Back Registrable Securities hereunder, the Registrable Securities and Piggy-Back Registrable Securities as to which registration has been requested under this Section 5.2, and the Common Stock, if any, as to which registration has been requested pursuant to the written contractual piggy-back registration rights of other stockholders of the Company, exceeds the maximum dollar amount or maximum number of shares that can be sold in such offering without adversely affecting the proposed offering price, the timing, the distribution method, or the probability of success of such offering (such maximum dollar amount or maximum number of shares, as applicable, the "**Maximum Number of Shares**"), then the Company shall include in any such registration:

(a) If the registration is undertaken for the Company's account: (A) first, the Common Stock or other securities that the Company desires to sell that can be sold without exceeding the Maximum Number of Shares; and (B) second, subject to the requirements of registration rights granted by the Company prior to the date hereof, to the extent that the Maximum Number of Shares has not been reached under the foregoing clause (A), up to the amount of shares of Common Stock or other securities that can be sold without exceeding the Maximum Number of Shares, on a pro rata basis, from (i) Piggy-Back Registrable Securities as to which registration has been requested pursuant to the applicable written contractual piggy-back registration rights of such security holders and (ii) the Common Stock or other securities for the account of other persons that the Company is obligated to register pursuant to written contractual piggy-back registration rights with such persons ;

(b) If the registration is a Demand Registration undertaken at the demand of holders of Registrable Securities, subject to the requirements of registration rights granted by the Company prior to the date hereof, (A) first, the Common Stock or other securities for the account of the demanding persons that can be sold without exceeding the Maximum Number of Shares; (B) second, to the extent that the Maximum Number of Shares has not been reached under the foregoing clause (A), the Common Stock or other securities comprised of Piggy-Back Registrable Securities, pro rata, as to which registration has been requested pursuant to the terms hereof that can be sold without exceeding the Maximum Number of Shares; and (C) third, to the extent that the Maximum Number of Shares has not been reached under the foregoing clauses (A) and (B), the Common Stock or other securities for the account of other persons that the Company is obligated to register pursuant to written contractual arrangements with such persons, that can be sold without exceeding the Maximum Number of Shares.

5.2.3 Withdrawal. Any holder of Piggy-Back Registrable Securities may elect to withdraw such holder's request for inclusion of such Piggy-Back Registrable Securities in any Piggy-Back Registration by giving written notice to the Company of such request to withdraw prior to the effectiveness of the registration statement. The Company (whether on its own determination or as the result of a withdrawal by persons making a demand pursuant to written contractual obligations) may withdraw a registration statement at any time prior to the effectiveness of the registration statement. Notwithstanding any such withdrawal, the Company shall pay all expenses incurred by the holders of Piggy-Back Registrable Securities in connection with such Piggy-Back Registration as provided in Section 5.2.4.

5.2.4 Terms. The Company shall bear all fees and expenses attendant to registering the Piggy-Back Registrable Securities, including the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Piggy-Back Registrable Securities but the Holders shall pay any and all underwriting commissions related to the Piggy-Back Registrable Securities. In the event of such a proposed registration, the Company shall furnish the then Holders of outstanding Piggy-Back Registrable Securities with not less than fifteen days written notice prior to the proposed date of filing of such registration statement. Such notice to the Holders shall continue to be given for each applicable registration statement filed (during the period in which the Purchase Warrant is exercisable) by the Company until such time as all of the Piggy-Back Registrable Securities have been registered and sold. The Holders of the Piggy-Back Registrable Securities shall exercise the "piggy-back" rights provided for herein by giving written notice, within ten days of the receipt of the Company's notice of its intention to file a registration statement. The Company shall use its best efforts to cause any registration statement filed pursuant to the above "piggyback" rights to remain effective for at least nine months from the date that the Holders of the Piggy-Back Registrable Securities are first given the opportunity to sell all of such securities.

5.3 General Terms. These additional terms shall relate to registration under Sections 5.1 and 5.2 above:

5.3.1 Indemnification. The Company shall, to the fullest extent permitted by applicable law, indemnify the Holder(s) of the Registrable Securities and/or Piggy-Back Registrable Securities to be sold pursuant to any registration statement hereunder and each person, if any, who controls such Holders within the meaning of Section 15 of the Act or Section 20(a) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**") against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against litigation, commenced or threatened, or any claim whatsoever whether arising out of any action between the underwriter and the Company or between the underwriter and any third party or otherwise) to which any of them may become subject under the Act, the Exchange Act or otherwise, arising from such registration statement. The Holder(s) of the Registrable Securities and/or Piggy-Back Registrable Securities to be sold pursuant to such registration statement, and their successors and assigns, shall severally, and not jointly, indemnify the Company, its officers and directors and each person, if any, who controls the Company within the meaning of Section 15 of the Act or Section 20(a) of the Exchange Act, against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against any claim whatsoever) to which they may become subject under the Act, the Exchange Act or otherwise, arising from information furnished by or on behalf of such Holders, or their successors or assigns, in writing, for specific inclusion in such registration statement.

5.3.2 Exercise of Purchase Warrants. Nothing contained in this Purchase Warrant shall be construed as requiring the Holder(s) to exercise their Purchase Warrants or convert or exercise its Series B Preferred Stock or Warrants underlying such Purchase Warrants prior to or after the initial filing of any registration statement or the effectiveness thereof.

5.3.3 Documents Delivered to Holders. The Company shall furnish the initial Holder a signed counterpart, addressed to the initial Holder, of (i) an opinion of counsel to the Company, dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, an opinion dated the date of the closing under any underwriting agreement related thereto), and (ii) if such registration statement is filed in connection of an underwritten public offering, a “cold comfort” letter dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, a letter dated the date of the closing under the underwriting agreement) signed by the independent public accountants who have issued a report on the Company’s financial statements included in such registration statement, in each case covering substantially the same matters with respect to such registration statement (and the prospectus included therein) and, in the case of such accountants’ letter, with respect to events subsequent to the date of such financial statements, as are customarily covered in opinions of issuer’s counsel and in accountants’ letters delivered to underwriters in underwritten public offerings of securities.

5.3.4 Underwriting Agreement. The Company shall enter into an underwriting agreement with the managing underwriter(s), if any, selected by either (i) any Holders whose Registrable Securities are being registered pursuant to this Section 5, which managing underwriter shall be reasonably acceptable to the Company or (ii) the Company, if only Piggy-Back Registrable Securities are being registered pursuant to this Section 5. Such agreement shall be reasonably satisfactory in form and substance to the Company, each Holder and such managing underwriters, and shall contain such representations, warranties and covenants by the Company and such other terms as are customarily contained in agreements of that type used by the managing underwriter. The Holders shall be parties to any underwriting agreement relating to an underwritten sale of their Registrable Securities and/or Piggy-Back Registrable Securities and may, at their option, require that any or all the representations, warranties and covenants of the Company to or for the benefit of such underwriters shall also be made to and for the benefit of such Holders. Such Holders shall not be required to make any representations or warranties to or agreements with the Company or the underwriters except as they may relate to such Holders and their intended methods of distribution. Such Holders, however, shall agree to such covenants and indemnification and contribution obligations for selling stockholders as are customarily contained in agreements of that type used by the managing underwriter. Further, such Holders shall execute appropriate custody agreements and otherwise cooperate fully in the preparation of the registration statement and other documents relating to any offering in which they include securities pursuant to this Section 5. Each Holder shall also furnish to the Company such information regarding itself, the Registrable Securities and/or Piggy-Back Registrable Securities held by it, and the intended method of disposition of such securities as shall be reasonably required to effect the registration of the Registrable Securities and/or Piggy-Back Registrable Securities.

5.3.5 Supplemental Prospectus. Each Holder agrees, that upon receipt of any notice from the Company of the happening of any event as a result of which the prospectus included in the registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing, such Holder will immediately discontinue disposition of Registrable Securities and/or Piggy-Back Registrable Securities pursuant to the registration statement covering such Registrable Securities and/or Piggy-Back Registrable Securities until such Holder’s receipt of the copies of a supplemental or amended prospectus, and, if so desired by the Company, such Holder shall deliver to the Company (at the expense of the Company) or destroy (and deliver to the Company a certificate of such destruction) all copies, other than permanent file copies then in such Holder’s possession, of the prospectus covering such Registrable Securities and/or Piggy-Back Registrable Securities current at the time of receipt of such notice. Immediately after discovering of such an event which causes the prospectus included in the registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing, the Company shall prepare and file, as soon as practicable, a supplement or amendment to the prospectus so that such registration statement does not include any untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing and distribute such supplement or amendment to each Holder.



## 6. Adjustments.

6.1 Adjustments to Exercise Price and Number of Securities. The Exercise Price and the number of Units underlying the Purchase Warrant shall be subject to adjustment from time to time in the same manner as public holders of such securities and as hereinafter set forth:

6.1.1 Share Dividends, Split-Ups, Stock Splits. If after the date hereof, and subject to the provisions of Section 6.3 below, the number of outstanding shares of Series B Preferred Stock is increased by a share dividend payable in shares of Series B Preferred Stock or by a split-up or stock split of Series B Preferred Stock or other similar event, then, on the effective date thereof, the number of shares of Series B Preferred Stock underlying each of the Units purchasable hereunder shall be increased in proportion to such increase in outstanding shares and the Exercise Price of this Purchase Warrant shall be adjusted proportionately such that the aggregate Exercise Price of this Purchase Warrant shall remain unchanged. If after the date hereof, the number of outstanding shares of Common Stock is increased by a share dividend payable in shares of Common Stock or by a split-up or stock split of Common Stock or other similar event, then, on the effective date thereof, (i) the number of shares of Common Stock, and the conversion price applicable thereto, underlying the Series B Preferred Stock underlying each of the Units purchasable hereunder shall be adjusted in accordance with the terms of the Certificate of Designation and (ii) the number of shares of common stock, and the exercise price applicable thereto, underlying the Warrants underlying each of the Units purchasable hereunder shall be adjusted in accordance with the terms of the Warrants.

6.1.2 Aggregation of Shares. If after the date hereof, and subject to the provisions of Section 6.3, the number of outstanding shares of Series B Preferred Stock is decreased by a consolidation, combination or reclassification of Series B Preferred Stock, reverse stock split, or other similar event, then, on the effective date thereof, the number of shares of Series B Preferred Stock underlying each of the Units purchasable hereunder shall be decreased in proportion to such decrease in outstanding shares and the Exercise Price of this Purchase Warrant shall be adjusted proportionately such that the aggregate Exercise Price of this Purchase Warrant shall remain unchanged. If after the date hereof, the number of outstanding shares of Common Stock is decreased by a consolidation, combination or reclassification of Common Stock, reverse stock split, or other similar event, then, on the effective date thereof, (i) the number of shares of Common Stock, and the conversion price applicable thereto, underlying the Series B Preferred Stock underlying each of the Units purchasable hereunder shall be adjusted in accordance with the terms of the Certificate of Designation and the number of shares of Common Stock and (ii) the number of shares of Common Stock, and the exercise price applicable thereto, underlying the Warrants underlying each of the Units purchasable hereunder shall be adjusted in accordance with the terms of the Warrants.

### 6.1.3 Subsequent Equity Sales.

6.1.3.1 If the Company or any subsidiary thereof, as applicable, at any time while this Purchase Warrant is outstanding, shall sell or grant any option to purchase, or sell or grant any right to reprice, or otherwise dispose of or issue (or announce any offer, sale, grant or any option to purchase or other disposition) any Common Stock or any other securities of the Company or the subsidiaries that would cause an adjustment to either or both of the shares of Series B Preferred Stock and Warrants if such securities were issued to the Holder at the time of the such issuance (collectively, a "**Dilutive Issuance**"), then, upon exercise of this Purchase Warrant, the Holder shall receive shares of Series B Preferred Stock and Warrants as adjusted for the Dilutive Issuance. .

6.1.4 Replacement of Securities upon Reorganization, etc. In case of any reclassification or reorganization of the outstanding Series B Preferred Stock or Common Stock other than a change covered by Section 6.1.1 or 6.1.2 hereof or that solely affects the par value of such Series B Preferred Stock or Common Stock, or in the case of any merger or consolidation of the Company with or into another corporation (other than a consolidation or merger in which the Company is the continuing corporation and that does not result in any reclassification or reorganization of the outstanding Series B Preferred Stock or Common Stock), or in the case of any sale or conveyance to another corporation or entity of the property of the Company as an entirety or substantially as an entirety in connection with which the Company is dissolved, the Holder of this Purchase Warrant shall have the right thereafter (until the expiration of the right of exercise of this Purchase Warrant) to receive upon the exercise hereof, for the same aggregate Exercise Price payable hereunder immediately prior to such event, the kind and amount of shares or other securities or property (including cash) receivable upon such reclassification, reorganization, merger or consolidation, or upon a dissolution following any such sale or transfer, by a Holder of the number of shares of Common Stock of the Company obtainable upon exercise of this Purchase Warrant and conversion of the underlying Series B Preferred Stock and exercise of the underlying Warrants immediately prior to such event; and if any reclassification also results in a change in Series B Preferred Stock or Common Stock covered by Section 6.1.1 6.1.2 or 6.1.3, then such adjustment shall be made pursuant to Sections 6.1.1, 6.1.2, 6.1.3 and this Section 6.1.4. The provisions of this Section 6.1.4 shall similarly apply to successive reclassifications, reorganizations, mergers or consolidations, sales or other transfers.

6.1.5 Changes in Form of Purchase Warrant. This form of Purchase Warrant need not be changed because of any change pursuant to this Section, and Purchase Warrants issued after such change may state the same Exercise Price and the same number of Units as are stated in the Purchase Warrants initially issued pursuant to this Purchase Warrant agreement. The acceptance by any Holder of the issuance of new Purchase Warrants reflecting a required or permissive change shall not be deemed to waive any rights to an adjustment occurring after the Commencement Date or the computation thereof.

6.2 Substitute Purchase Warrant. In case of any consolidation of the Company with, or merger of the Company with, or merger of the Company into, another corporation (other than a consolidation or merger which does not result in any reclassification or change of the outstanding Common Stock), the corporation formed by such consolidation or merger shall execute and deliver to the Holder a supplemental Purchase Warrant providing that the holder of each Purchase Warrant then outstanding or to be outstanding shall have the right thereafter (until the stated expiration of such Purchase Warrant) to receive, upon exercise of such Purchase Warrant, the kind and amount of shares and other securities and property receivable upon such consolidation or merger, by a holder of the number of shares of Common Stock of the Company for which such Purchase Warrant might have been exercised immediately prior to such consolidation, merger, sale or transfer giving effect to the exercise of this Purchase Warrant and the conversion of the underlying Series B Preferred Stock and exercise of the underlying Warrants. Such supplemental Purchase Warrant shall provide for adjustments which shall be identical to the adjustments provided in Section 6. The above provision of this Section shall similarly apply to successive consolidations or mergers.

6.3 Elimination of Fractional Interests. The Company shall not be required to issue certificates representing fractions of shares of Series B Preferred Stock or Warrants upon the exercise of the Purchase Warrant, nor shall it be required to issue scrip or pay cash in lieu of any fractional interests, it being the intent of the parties that all fractional interests shall be eliminated by rounding any fraction up or down to the nearest whole number of Series B Preferred Stock, Warrants, shares of Common Stock, if applicable, or other securities, properties or rights.

## **7. Redemption of Series B Preferred Stock.**

7.1 Notice of Optional Redemption. On the date on which the Company sends an Optional Redemption Notice (as defined in the Certificate of Designation) to the holders of the Series B Preferred Stock, the Company shall also send a copy of such notice to the Holders of this Purchase Warrant.

7.2 Exercise. On or prior to the Optional Redemption Date (as defined in the Certificate of Designation), the Holder shall have the option to exercise this Purchase Warrant and receive the Warrants and the Series B Preferred Stock, which such Series B Preferred Stock shall also be redeemed on the Optional Redemption Date for the Optional Redemption Amount (as defined in the Certificate of Designation). If any of the Equity Conditions (as defined in the Certificate of Designation) shall cease to be satisfied at any time during the 30 Trading Day (as defined in the Certificate of Designation) period, then a Holder shall have the right to withdraw the exercise of this Purchase Warrant and such exercise of this Purchase Warrant shall be null and void, *ab initio*.

7.3 Exercise Directly into Common Stock. If following such time that the Company redeemed all shares of Series B Preferred or all shares of Series B Preferred Stock have been converted the Holder continues to hold this Purchase Warrant, notwithstanding anything to the contrary contained herein, upon exercise of this Purchase Warrant in accordance with Section 2, instead of receiving the Units, the Holder shall receive units to purchase the Warrants and such number of shares of Common Stock that such Holder would have received if such Holder exercised this Purchase Warrant immediately prior to the redemption or exercise of the last share of Series B Preferred Stock outstanding and then exercised such number of shares of Series B Preferred Stock underlying this Purchase Warrant.

8. **Reservation.** The Company shall at all times reserve and keep available out of its authorized but unissued shares of Series B Preferred Stock and Common Stock (solely for the purpose of issuance upon conversion of the Series B Preferred Stock and/or exercise of the Warrants underlying the Purchase Warrant) such number of shares of Series B Preferred Stock and Common Stock or other securities, properties or rights as shall be issuable upon the exercise thereof. The Company covenants and agrees that, upon exercise of the Purchase Warrants and payment of the Exercise Price therefor, all shares of Series B Preferred Stock and other securities issuable upon such exercise shall be duly and validly issued, fully paid and non-assessable and not subject to preemptive rights of any stockholder. The Company further covenants and agrees that upon conversion of the Series B Preferred Stock and exercise of the Warrants underlying the Purchase Warrants and payment of the respective Warrant exercise price therefor, all shares of Common Stock and other securities issuable upon such exercise shall be duly and validly issued, fully paid and non-assessable and not subject to preemptive rights of any stockholder.

## 9. Certain Notice Requirements.

9.1 Holder's Right to Receive Notice. Nothing herein shall be construed as conferring upon the Holders the right to vote or consent as a stockholder for the election of directors or any other matter, or as having any rights whatsoever as a stockholder of the Company. If, however, at any time prior to the expiration of the Purchase Warrants and their exercise, any of the events described in Section 9.2 shall occur, then, in one or more of said events, the Company shall give written notice of such event at least fifteen days prior to the date fixed as a record date or the date of closing the transfer books for the determination of the stockholders entitled to such dividend, distribution, conversion or exchange of securities or subscription rights, or entitled to vote on such proposed dissolution, liquidation, winding up or sale. Such notice shall specify such record date or the date of the closing of the transfer books, as the case may be. Notwithstanding the foregoing, the Company shall deliver to each Holder a copy of each notice given to the other stockholders of the Company at the same time and in the same manner that such notice is given to the stockholders.

9.2 Events Requiring Notice. The Company shall be required to give the notice described in this Section 9 upon one or more of the following events: (i) if the Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or distribution payable otherwise than in cash, or a cash dividend or distribution payable otherwise than out of retained earnings, as indicated by the accounting treatment of such dividend or distribution on the books of the Company, or (ii) the Company shall offer to all the holders of its Common Stock any additional shares of the Company or securities convertible into or exchangeable for shares of the Company, or any option, right or warrant to subscribe therefor, or (iii) a dissolution, liquidation or winding up of the Company (other than in connection with a consolidation or merger) or a sale of all or substantially all of its property, assets and business shall be proposed, or (iv) at any time the Company provides notice to the holders of Series B Preferred Stock or Warrants.

9.3 Notice of Change in Exercise Price. The Company shall, promptly after an event requiring a change in the Exercise Price pursuant to Section 6 hereof, send notice to the Holders of such event and change ("**Price Notice**"). The Price Notice shall describe the event causing the change and the method of calculating same and shall be certified as being true and accurate by the Company's President and Chief Financial Officer.

9.4 Transmittal of Notices. All notices, requests, consents and other communications under this Purchase Warrant shall be in writing and shall be deemed to have been duly made when hand delivered, or mailed by express mail or private courier service: (i) if to the registered Holder of the Purchase Warrant, to the address of such Holder as shown on the books of the Company, or (ii) if to the Company, to the following address or to such other address as the Company may designate by notice to the Holders:

Amedica Corporation  
1885 West 2100 South  
Salt Lake City, UT 84119  
Attention: Dave O'Brien

## 10. Miscellaneous.

10.1 Amendments. This Purchase Warrant may be modified or amended or the provisions hereof waived only with the written consent of the Company and the Holder.

10.2 Headings. The headings contained herein are for the sole purpose of convenience of reference, and shall not in any way limit or affect the meaning or interpretation of any of the terms or provisions of this Purchase Warrant.

10.3 Severability. Wherever possible, each provision of this Purchase Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Purchase Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Purchase Warrant.

10.4 Entire Agreement. This Purchase Warrant (together with the other agreements and documents being delivered pursuant to or in connection with this Purchase Warrant) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof, and supersedes all prior agreements and understandings of the parties, oral and written, with respect to the subject matter hereof.

10.5 Binding Effect. This Purchase Warrant shall inure solely to the benefit of and shall be binding upon, the Holder and the Company and their permitted assignees, respective successors, legal representative and assigns, and no other person shall have or be construed to have any legal or equitable right, remedy or claim under or in respect of or by virtue of this Purchase Warrant or any provisions herein contained.

10.6 Governing Law; Submission to Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Purchase Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Purchase Warrant (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of the Purchase Warrant), and hereby irrevocably waives, and agrees not to assert in any action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Purchase Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If any party shall commence an action or proceeding to enforce any provisions of this Purchase Warrant, then the prevailing party in such action or proceeding shall be reimbursed by the non-prevailing party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

10.7 Waiver, Etc. The failure of the Company or the Holder to at any time enforce any of the provisions of this Purchase Warrant shall not be deemed or construed to be a waiver of any such provision, nor to in any way affect the validity of this Purchase Warrant or any provision hereof or the right of the Company or any Holder to thereafter enforce each and every provision of this Purchase Warrant. No waiver of any breach, non-compliance or non-fulfillment of any of the provisions of this Purchase Warrant shall be effective unless set forth in a written instrument executed by the party or parties against whom or which enforcement of such waiver is sought; and no waiver of any such breach, non-compliance or non-fulfillment shall be construed or deemed to be a waiver of any other or subsequent breach or non-compliance.

10.8 Execution in Counterparts. This Purchase Warrant may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one and the same agreement, and shall become effective when one or more counterparts has been signed by each of the parties hereto and delivered to each of the other parties hereto.

10.9 Successors and Assigns. Subject to applicable securities laws, this Purchase Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Purchase Warrant are intended to be for the benefit of any Holder from time to time of this Purchase Warrant and shall be enforceable by the Holder or holder of the Delivered Securities.

\*\*\*\*\*

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Purchase Warrant to be signed by its duly authorized officer as of the \_\_\_\_ day of \_\_\_\_\_, 2018.

**AMEDICA CORPORATION**

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

Form to be used to exercise Purchase Warrant:

Amedica Corporation  
[

]

Fax No.: [ ]  
Attn.:

Date: \_\_\_\_\_, 20\_\_

The undersigned hereby elects irrevocably to exercise all or a portion of the within Purchase Warrant and to purchase \_\_\_\_ Units of Amedica Corporation and hereby makes payment of \$\_\_\_\_\_ (at the rate of \$[ ] per Unit) in payment of the Exercise Price pursuant thereto. Please issue the securities as to which this Purchase Warrant is exercised in accordance with the instructions given below.

or

The undersigned hereby elects irrevocably to convert its right to purchase \_\_\_\_\_ Units purchasable under the within Purchase Warrant by surrender of the unexercised portion of the attached Purchase Warrant (with a "Value" based of \$\_\_\_\_\_ based on a "Market Price" of \$\_\_\_\_\_). Please issue the securities comprising the Units as to which this Purchase Warrant is exercised in accordance with the instructions given below.

NOTICE: The signature to this assignment must correspond with the name as written upon the face of the Purchase Warrant in every particular, without alteration or enlargement or any change whatever.

Signature(s) Guaranteed:

\_\_\_\_\_  
THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15).

INSTRUCTIONS FOR REGISTRATION OF SECURITIES

Name

\_\_\_\_\_  
(Print in Block Letters)

Address

\_\_\_\_\_

Form to be used to assign Purchase Warrant:

ASSIGNMENT

(To be executed by the registered Holder to effect a transfer of the within Purchase Warrant):

FOR VALUE RECEIVED, \_\_\_\_\_ does hereby sell, assign and transfer unto \_\_\_\_\_ the right to purchase \_\_\_\_\_ Units of Amedica Corporation (“**Company**”) evidenced by the within Purchase Warrant and does hereby authorize the Company to transfer such right on the books of the Company.

Dated: \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
NOTICE: The signature to this assignment must correspond with the name as written upon the face of the Purchase Warrant in every particular, without alteration or enlargement or any change whatever.

Signature(s) Guaranteed:

\_\_\_\_\_  
THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15).





April 30, 2018

Amedica Corporation  
1885 West 2100 South  
Salt Lake City, UT 84119

Re: Registration Statement on Form S-1 (File No. 333-223032)

Ladies and Gentlemen:

We have acted as counsel to Amedica Corporation, a Delaware corporation (the "Company"), in connection with a Registration Statement on Form S-1 (the "Registration Statement") filed by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to the offer and sale by the Company of 12,500 units (the "Offered Units") at a price of \$1,000 per Offered Unit, with each Offered Unit consisting of (A) one share of the Company's Series B Convertible Preferred Stock, par value \$0.01 per share (the "Offered Preferred Stock"), with each share of Offered Preferred Stock initially convertible into a number of shares of the Company's Common Stock, par value \$0.01 per share (the "Common Stock"); and the shares of Common Stock issuable upon conversion of the Offered Preferred Stock, the "Offered Conversion Shares"), as specified in the Registration Statement, and (B) a number of warrants as specified in the Registration Statement (the "Offered Warrants"), with each Offered Warrant to purchase one share of Common Stock (the shares of Common Stock issuable upon exercise of the Offered Warrants, the "Offered Warrant Shares"). The Registration Statement also relates to the offer and sale by the Company of a number of warrants as specified in the Registration Statement to be issued to the underwriter (the "Underwriter Warrants") and the issuance of units issuable upon exercise of the Underwriter Warrants (the "Underwriter Warrant Units" and, together with the Offered Units, the "Units"). The Underwriter Warrant Units consist of (x) one share of the Company's Series B Convertible Preferred Stock, par value \$0.01 per share (the "Underwriter Preferred Stock" and, together with the Offered Preferred Stock, the "Preferred Stock"), with each share of Underwriter Preferred Stock initially convertible into a number of shares of Common Stock as specified in the Registration Statement (the shares of Common Stock issuable upon conversion of the Underwriter Preferred Stock, the "Underwriter Conversion Shares" and, together with the Offered Conversion Shares, the "Conversion Shares"), and (y) a number of warrants as specified in the Registration Statement (the "Underlying Underwriter Warrants" and, together with the Offered Warrants, the "Warrants"), with each Underlying Underwriter Warrant to purchase one share of Common Stock (the shares of Common Stock issuable upon exercise of the Underlying Underwriter Warrants, the "Underwriter Warrant Shares" and, together with the Offered Warrants Shares, the "Warrant Shares").

We have examined such documents and have reviewed such questions of law as we have considered necessary or appropriate for the purposes of our opinions set forth below. In rendering our opinions set forth below, we have assumed the authenticity of all documents submitted to us as originals, the genuineness of all signatures and the conformity to authentic originals of all documents submitted to us as copies. We have also assumed the legal capacity for all purposes relevant hereto of all natural persons and, with respect to all parties to agreements or instruments relevant hereto other than the Company, that such parties had the requisite power and authority (corporate or otherwise) to execute, deliver and perform such agreements or instruments, that such agreements or instruments have been duly authorized by all requisite action (corporate or otherwise), executed and delivered by such parties and that such agreements or instruments are the valid, binding and enforceable obligations of such parties. We have further assumed that the Units will be priced by the Pricing Committee established by the authorizing resolutions adopted by the Company's Board of Directors in accordance with such resolutions. As to questions of fact material to our opinions, we have relied upon certificates or comparable documents of officers and other representatives of the Company and of public officials.

---

Based on the foregoing, we are of the opinion that:

1. The Units, when issued and delivered against payment therefor as described in the Registration Statement, will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
  2. The Warrants, when issued and delivered against payment therefor as described in the Registration Statement, will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
  3. The Warrant Shares, when issued upon exercise of the Warrants in accordance with the terms thereof and the Company's Restated Certificate of Incorporation (the "Certificate of Incorporation"), including, without limitation, the payment in full of applicable consideration, will be validly issued, fully paid and non-assessable.
  4. The shares of Preferred Stock, when issued and delivered against payment therefor as described in the Registration Statement, will be validly issued, fully paid and non-assessable.
  5. The Conversion Shares, when issued upon conversion of the Preferred Stock in accordance with the Certificate of Designation of the Series B Convertible Preferred Stock and the Certificate of Incorporation, will be validly issued, fully paid and non-assessable.
  6. The Underwriter Warrants, when issued and delivered against payment therefor as described in the Registration Statement, will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
    - (a) Our opinions set forth above are subject to the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar law relating to or affecting creditors' rights generally (including, without limitation, fraudulent conveyance laws).
    - (b) Our opinions set forth above are subject to the effect of general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance or injunctive relief, regardless of whether considered in a proceeding in equity or at law.
-

- (c) Our opinions set forth above are subject to limitations regarding the availability of indemnification and contribution where such indemnification or contribution may be limited by applicable law or the application of principles of public policy.
- (d) For purposes of our opinions set forth above, we have assumed that the Underwriter Warrants and the Warrants will be exercised by the holders thereof immediately following the issuance thereof and that the Preferred Stock will be converted into Common Stock by the holders thereof immediately following the issuance thereof.
- (e) We express no opinion as to the enforceability of (i) provisions that relate to choice of law, forum selection or submission to jurisdiction (including, without limitation, any express or implied waiver of any objection to venue in any court or of any objection that a court is an inconvenient forum) to the extent that the validity, binding effect or enforceability of any such provision is to be determined by any court other than a state court of the State of New York, (ii) waivers by the Company of any statutory or constitutional rights or remedies, (iii) terms which excuse any person or entity from liability for, or require the Company to indemnify such person or entity against, such person's or entity's negligence or willful misconduct or (iv) obligations to pay any prepayment premium, default interest rate, early termination fee or other form of liquidated damages, if the payment of such premium, interest rate, fee or damages may be construed as unreasonable in relation to actual damages or disproportionate to actual damages suffered as a result of such prepayment, default or termination.
- (f) We draw your attention to the fact that, under certain circumstances, the enforceability of terms to the effect that provisions may not be waived or modified except in writing may be limited.

Our opinions expressed above are limited to the laws of the State of New York and the Delaware General Corporation Law.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement, and to the reference to our firm under the heading "Legal Matters" in the prospectus constituting part of the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

*/s/ Dorsey & Whitney LLP*

---

