

# IMMUNOCELLULAR THERAPEUTICS, LTD.

## **FORM S-1/A** (Securities Registration Statement)

Filed 07/10/17

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Telephone	818-264-2300
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Industry	Biotechnology & Medical Research
Sector	Healthcare
Fiscal Year	12/31

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

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**Amendment No. 3**  
**to**  
**FORM S-1**  
**REGISTRATION STATEMENT**  
**UNDER**  
**THE SECURITIES ACT OF 1933**

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**IMMUNOCELLULAR THERAPEUTICS, LTD.**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

2834  
(Primary Standard Industrial  
Classification Code Number)

93-1301885  
(I.R.S. Employer  
Identification No.)

23622 Calabasas Road, Suite 300  
Calabasas, California 91302  
(818) 264-2300  
(Address, including zip code and telephone number, including area code, of registrant's principal place of business)

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Anthony Gringeri, Ph.D.  
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(818) 264-2300  
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Approximate date of commencement of proposed sale to the public : As soon as practicable after the effective date of this registration statement.

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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, as amended, 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, 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(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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 to Section 7(a)(2)(B) of the Securities Act.

### CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed maximum aggregate offering price(1)	Amount of registration fee(5)
Units, each consisting of (i) one share of Series B 8.0% Mandatorily Convertible Preferred Stock, par value \$0.0001, stated value \$1,080 per share (the "Preferred Stock"), (ii) 0.6 of a Series 1 Warrant to purchase shares of Preferred Stock, par value \$0.0001 per share, (iii) 0.6 of a Series 2 Warrant to purchase shares of Preferred Stock, par value \$0.0001 per share and (iv) 0.6 of a Series 3 Warrant to purchase shares of Preferred Stock, par value \$0.0001 per share.	\$5,000,000	\$580
Series B 8.0% Mandatorily Convertible Preferred Stock, par value \$0.0001, stated value \$1,080 per share (2)(3)	—	—
Series 1 Warrants to Purchase Preferred Stock (2)(3)	—	—
Series 2 Warrants to Purchase Preferred Stock (2)(3)	—	—
Series 3 Warrants to Purchase Preferred Stock (2)(3)	—	—
Series B 8.0% Mandatorily Convertible Preferred Stock, par value \$0.0001 per share, issuable under the Series 1 Warrants, the Series 2 Warrants and the Series 3 Warrants	\$9,000,000	\$1,160
Common Stock, par value \$0.0001 per share, issuable under the Preferred Stock (2)(4)	—	—
<b>Total:</b>	<b>\$14,000,000</b>	<b>\$1,740</b>

- (1) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended (Securities Act).
- (2) Pursuant to Rule 457(i) of and existing interpretations under the Securities Act, no separate registration fee is required for the Preferred Stock, Warrants and the Common Stock underlying the Preferred Stock and Warrants because such securities are being registered at the same time as the Units.
- (3) Pursuant to Rule 416, the securities being registered hereunder include such indeterminate number of additional securities as may be issuable to prevent dilution resulting from stock splits, stock dividends or similar transactions.
- (4) No fee pursuant to Rule 457(g).
- (5) Calculated pursuant to Rule 457(o) based on an estimate of the total proposed maximum aggregate offering price. The Registrant previously paid \$2,318 with the initial filing 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 files 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, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to Section 8(a), may determine.

**The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting an offer to purchase these securities in any jurisdiction where the offer or sale is not permitted.**

**Preliminary Prospectus**

**SUBJECT TO COMPLETION, DATED JULY 7, 2017**



**5,000 Units  
Each Consisting of  
One Share of Series B 8.0% Mandatorily Convertible Preferred Stock and  
Series 1 Warrants to Purchase One Share of Series B Preferred Stock  
Series 2 Warrants to Purchase One Share of Series B Preferred Stock  
Series 3 Warrants to Purchase One Share of Series B Preferred Stock**

We are offering up to 5,000 units, or "Units," each consisting of: (i) one share of our Series B 8.0% Mandatorily Convertible Preferred Stock, par value \$0.0001 per share, with a stated value of \$1,080.00 per share, or "Preferred Stock" or "Series B Preferred Stock", which is initially convertible into 7,397,260 shares of our common stock, par value \$0.0001 per share, or "Common Stock"; assuming a conversion price of \$0.73, which is equal to 87.5% of the lowest volume weighted average trading price of the Common Stock during the ten trading days ending June 21, 2017, (ii) 0.6 of a Series 1 Warrant to purchase one share of Preferred Stock, (iii) 0.6 of a Series 2 Warrant to purchase one share of Preferred Stock, and (iv) 0.6 of a Series 3 Warrant to purchase one share of Preferred Stock. The Units will not be issued or certificated. The Preferred Stock, Series 1 Warrants, Series 2 Warrants and the Series 3 Warrants, which we refer to as the "Warrants," are immediately separable and will be issued separately, but will be purchased together as a unit in this offering.

Each Warrant will have an initial exercise price of \$1,000.00 per share of Preferred Stock. The Series 1 Warrant will be exercisable immediately after issuance and will expire three months from the date of issuance. The Series 2 Warrant will be exercisable immediately after issuance and will expire six months from the date of issuance. The Series 3 Warrant will be exercisable immediately after issuance and will expire twelve months from the date of issuance.

The Preferred Stock is convertible into shares of Common Stock by dividing the stated value of the Preferred Stock by the conversion price. The conversion price is equal to the lesser of (a) \$ per share of Common Stock, referred to as the "Set Price," subject to certain adjustments, and (b) 87.5% of the lowest volume weighted average price for our Common Stock as reported at the close of trading on the market reporting trade prices for the Common Stock during the ten trading days ending on, and including, the date of the notice of conversion. Each share of Preferred Stock still outstanding on the twelve-month anniversary of the applicable date of issuance will be automatically converted into shares of Common Stock at a conversion price equal to 87.5% of the lowest volume weighted average trading price of the Common Stock during the ten trading days ending on, and including the date of delivery of a notice of conversion, subject to adjustment and equity conditions as provided for in the Certificate of Designation.

**Investing in our securities involves a high degree of risk. See the section titled " *Risk Factors* " beginning on page 6 of this prospectus. You should carefully consider these risk factors, as well as the information contained in this prospectus, before you invest.**

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**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

Our Common Stock is listed on the NYSE MKT under the symbol "IMUC." The last reported sale price of our Common Stock on June 27, 2017 was \$0.88 per share. There is no established public trading market for the Units, the Series B Preferred Stock, the Series 1 Warrants, the Series 2 Warrants or the Series 3 Warrants, and we do not expect a market to develop. In addition, we do not intend to list the Units, the Series B Preferred Stock, the Series 1 Warrants, the Series 2 Warrants or the Series 3 Warrants on the NYSE MKT, any other national securities exchange or any other nationally recognized trading system.

Maxim Group LLC, which we refer to as the "representative," has agreed to act as the representative of the underwriters in connection with this offering. The underwriters may engage one or more selected dealers in this offering.

	<u>Per Unit</u>	<u>Total</u>
<b>Public offering price</b>	\$	
<b>Underwriter discount</b>	\$	
<b>Proceeds, before expenses, to us(1)</b>	\$	

(1) We estimate the total expenses of this offering payable by us, excluding the underwriting discount, will be approximately \$485,000.

In addition, the Company has agreed to pay the underwriter a warrant solicitation fee equal to 2.5% of the gross proceeds from the exercise of any Warrants solicited by the underwriter. Please refer to the section entitled "Plan of Distribution" in this prospectus for additional information regarding total compensation for the underwriter.

The above summary of offering proceeds to us does not give effect to any exercise of the warrants being issued in this offering. Delivery of the Preferred Stock, the Series 1 Warrants, the Series 2 Warrants and the Series 3 Warrants is expected to be made on or before , 2017 subject to customary closing conditions.

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*Sole Book-Running Manager*

**Maxim Group LLC**

**The date of this prospectus is , 2017.**

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## TABLE OF CONTENTS

<a href="#">PROSPECTUS SUMMARY</a>	<a href="#">1</a>
<a href="#">SUMMARY OF THE OFFERING</a>	<a href="#">4</a>
<a href="#">RISK FACTORS</a>	<a href="#">6</a>
<a href="#">CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS</a>	<a href="#">12</a>
<a href="#">USE OF PROCEEDS</a>	<a href="#">13</a>
<a href="#">MARKET PRICE OF OUR COMMON STOCK</a>	<a href="#">14</a>
<a href="#">DIVIDEND POLICY</a>	<a href="#">14</a>
<a href="#">DILUTION</a>	<a href="#">15</a>
<a href="#">SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</a>	<a href="#">17</a>
<a href="#">DESCRIPTION OF CAPITAL STOCK</a>	<a href="#">19</a>
<a href="#">DESCRIPTION OF THE SECURITIES WE ARE OFFERING</a>	<a href="#">24</a>
<a href="#">MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS</a>	<a href="#">30</a>
<a href="#">UNDERWRITING</a>	<a href="#">36</a>
<a href="#">NOTICE TO INVESTORS</a>	<a href="#">39</a>
<a href="#">LEGAL MATTERS</a>	<a href="#">40</a>
<a href="#">EXPERTS</a>	<a href="#">41</a>
<a href="#">WHERE YOU CAN FIND MORE INFORMATION AND INCORPORATION BY REFERENCE</a>	<a href="#">41</a>

**We and the underwriter have not authorized anyone to provide any information or to make any representations other than those contained in or incorporated by reference in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in or incorporated by reference in this prospectus is accurate only as of its date regardless of the time of delivery of this prospectus or of any sale of Units, Preferred Stock, Series 1 Warrants, Series 2 Warrants, Series 3 Warrants or Common Stock.**

To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference filed with the Securities and Exchange Commission (SEC) before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in a document incorporated by reference is inconsistent with a statement in another document incorporated by reference having a later date, the statement in the document having the later date modifies or supersedes the earlier statement.

Neither we nor the underwriter has done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons who come into possession of this prospectus and any free writing prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus and any free writing prospectus applicable to that jurisdiction.

This prospectus and the documents incorporated by reference in this prospectus contain market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe that these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. Although we are not aware of any misstatements regarding the market and industry data presented or incorporated by reference in this prospectus, these estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “Risk Factors” and any related free writing prospectus. Accordingly, investors should not place undue reliance on this information.

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## PROSPECTUS SUMMARY

*This summary highlights certain information about us, this offering and selected information contained elsewhere in this prospectus and in the documents incorporated by reference. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our securities. For a more complete understanding of our company and this offering, we encourage you to read and consider carefully the more detailed information contained in or incorporated by reference in this prospectus, including the information contained under the heading "Risk Factors" beginning on page 6 of this prospectus, and the information included in any free writing prospectus that we have authorized for use in connection with this offering.*

*Throughout this prospectus, the terms "we," "us," "our," and "our company" refer to ImmunoCellular Therapeutics, Ltd.*

### Company Overview

ImmunoCellular Therapeutics, Ltd. is a clinical-stage biotechnology company that is developing immune-based therapies for the treatment of cancers. Immunotherapy is an emerging approach to treating cancer in which a patient's own immune system is stimulated to target tumor antigens, which are molecular signals that the immune system uses to identify foreign bodies. While some other cancer immunotherapies target only a single cancer antigen, our technology can elicit an immune response against several antigens simultaneously. Our clinical stage cancer immunotherapy programs are also distinguished by the fact that they target cancer stem cells (CSCs), which are the primary drivers of tumor growth and disease recurrence.

In June 2017, we announced that we had determined that we were unable to secure sufficient additional financial resources to complete the phase 3 registration trial of ICT-107, our patient-specific, dendritic cell-based immunotherapy for patients with newly diagnosed glioblastoma, which was previously our lead product candidate. As a result, we have suspended further patient randomization in the ICT-107 trial while we continue to seek a collaborative arrangement or acquisition of our ICT-107 program. The suspension of the phase 3 registration trial of ICT-107 is expected to reduce the amount of cash used in our operations.

We are developing Stem-to-T-Cell immunotherapies for the treatment of cancer based on rights to novel technology we exclusively licensed from the California Institute of Technology (Caltech). The technology originated from the labs of David Baltimore, Ph.D., Nobel Laureate and President Emeritus at Caltech, and utilizes the patient's own hematopoietic stem cells to create antigen-specific killer T cells to treat cancer. We plan to utilize this technology to expand and complement our DC-based cancer immunotherapy platform, with the goal of developing new immunotherapies that kill cancer cells in a highly directed and specific manner and that can function as monotherapies or in combination therapy approaches.

Caltech's technology potentially addresses the challenge, and limitation, that TCR (T cell receptor) technologies have faced of generating a limited immune response and having an unknown persistence in the patient's body. We believe that by inserting DNA that encodes T cell receptors into hematopoietic stem cells rather than into T cells, the immune response can be transformed into a durable and more potent response that could effectively treat solid tumors. This observation has been verified in animal models by investigators at Caltech and the National Cancer Institute.

In March 2017, we announced the successful completion of the first milestone of our Stem-to-T-cell program; the sequencing of a selected TCR, that will become the basis for the product development program. In November 2015, we entered into a sponsored research agreement with The University of Texas MD Anderson Cancer Center with the goal of identifying a TCR sequence. In addition, in 2015 we acquired an option from Stanford University to evaluate certain technology related to the identification of TCRs that could prove useful in supporting our Stem-to-T-Cell research efforts. In March 2017, a TCR sequence for our Stem-to-T-Cell program became available.

In addition, we have entered into a sponsored research agreement with the University of Maryland, Baltimore (UMB). As part of this collaboration, UMB researchers are undertaking three projects to explore potential enhancements to our dendritic cell and Stem-to-T-Cell immunotherapy platforms.

We are also developing two other therapeutic immunotherapies: ICT-140 for ovarian cancer and ICT-121 for recurrent GBM. ICT-140 targets seven tumor-associated antigens expressed on ovarian cancer cells. Some of the antigens utilized in ICT-140 were also used in ICT-107. We filed an investigational new drug (IND) application for ICT-140 at the end of 2012 and the IND was allowed by the FDA in January 2013. We subsequently modified the design of the trial and amended the IND to reflect these changes in May 2013 and September 2014. These amendments were allowed by the FDA shortly after the submissions. In the interim, we upgraded our generalized DC immunotherapy manufacturing process to bring it to a phase 3 and commercial ready state. We plan to use this improved process to manufacture clinical supplies for the ICT-140 trial. Currently, we are holding the initiation of this trial until we can find a partner to share expenses.

ICT-121 specifically targets CD133, a CSC marker that is overexpressed in a wide variety of solid tumors, including ovarian, pancreatic, and breast cancers. We began screening patients in September 2013 for a single-site phase 1 trial in recurrent GBM. Originally it was our intention to enroll 20 patients at one site. However, during 2014, we determined that enrollment could be accelerated if additional sites were added to the study. In 2015 we added five sites and made modifications in the screening criteria to facilitate enrollment. As of July 21, 2016, the trial was fully enrolled. The trial was closed in March 2017 and the final results should be available within three to four months. Preliminary findings were presented at the ASCO conference in June 2017.

Autologous cell-based therapies must be manufactured separately for each patient. Consequently, the manufacturing costs are typically higher than other types of therapies that are not patient-specific. Our DC immunotherapy manufacturing process produces multiple doses for a patient from a single manufacturing run utilizing a single apheresis from the patient. Each manufacturing run takes three days to complete. In addition, the immunotherapy is stored frozen in liquid nitrogen making the logistics of shipping and administration to the patient easier than those for cell therapies that must be shipped fresh and administered to the patient within hours of manufacture.

While we believe that we have a promising technology portfolio of multiple clinical-stage candidates, we do not currently anticipate that we will generate any revenues from either product sales or licensing in the foreseeable future. We have financed the majority of our prior operations through the sales of securities and believe that we may access grants and awards to supplement future sales of securities. On September 18, 2015, the Company received an award in the amount of \$19.9 million from the California Institute of Regenerative Medicine (CIRM) to partially fund our phase 3 trial of ICT-107. The award provided for a \$4.0 million project initial payment, which was received during the fourth quarter of 2015, and up to \$15.9 million in future milestone payments that are primarily dependent on patient enrollment and randomization in the ICT-107 phase 3 trial. In June 2016, the terms of the award from CIRM were amended to (i) increase the project initial payment by \$1.5 million, which we received on July 18, 2016, and (ii) reduce the potential future milestone payments by a corresponding \$1.5 million. The potential total amount of the award from CIRM remained at \$19.9 million. Under the terms of the CIRM award, we are obligated to share future ICT-107 related revenue with CIRM. The percentage of revenue sharing is dependent on the amount of the award we receive and whether the revenue is from product sales or license fees. The maximum revenue sharing amount we may be required to pay to CIRM is equal to nine times the total amount awarded and received. We have the option to decline any and all amounts awarded by CIRM. As an alternative to revenue sharing, we have the option to convert the award to a loan, which option must be exercised on or before ten (10) business days after the FDA notifies us that it has accepted our application for marketing authorization. In the event we exercise our right to convert the award to a loan, we will be obligated to repay the loan within ten (10) business days of making such election, including interest at the rate of the three-month LIBOR rate (1.07% as of March 31, 2017) plus 25% per annum. As described above, we have suspended our ICT-107 trial. In the event that we terminate the trial, we will be obligated to repay the remaining CIRM funds on-hand. As of March 31, 2017, we had approximately \$400,000 of remaining CIRM funds on-hand.



The estimated cost of completing the development of any of the current or potential immunotherapy candidates will require us to raise additional capital, generate additional capital from the uncertain exercise of outstanding warrants, or enter into collaboration agreements with third parties. There can be no assurances that we will be able to obtain any additional funding, or if such funding is available, that the terms will be favorable. In addition, collaborations with third parties may not be available to us and may require us to surrender rights to many of our products, which may reduce the potential share of returns in any licensed products. If we are unable to raise sufficient capital or secure collaborations with third parties, we will not be able to further develop our product candidates.

### **Recent Developments**

We are undertaking an evaluation of strategic alternatives for our immuno-oncology research and development pipeline and technology platform, which may include a potential merger, consolidation, reorganization or other business combination, as well as the sale of the company or the company's assets. While we evaluate strategic alternatives, we plan to continue to advance our research and development strategies.

In March 2017, we announced the signing of a non-binding letter of intent with Memgen, LLC to exclusively negotiate the terms to possibly establish an immuno-oncology strategic collaboration focused on conducting clinical trials combining the companies' respective cancer immunotherapy product candidates. The discussions pertain to our DC-based immunotherapy product candidates and Memgen's ISF35, a viral cancer immunotherapy encoding an optimized version of CD40 ligand.

### **Company Information**

We filed our original Certificate of Incorporation with the Secretary of State of Delaware on March 20, 1987 under the name Redwing Capital Corp. On June 16, 1989, we changed our name to Patco Industries, Ltd. and conducted an unrelated business under that name until 1994. On January 30, 2006, we amended our Certificate of Incorporation to change our name to Optical Molecular Imaging, Inc. in connection with our merger on January 31, 2006 with Spectral Molecular Imaging, Inc. The acquisition was accounted for as a reverse merger, with Spectral Molecular Imaging deemed to be the accounting acquirer and Optical Molecular Imaging deemed to be the legal acquirer. As such, the consolidated financial statements herein reflect the historical activity of Spectral Molecular Imaging since its inception on February 25, 2004. On November 2, 2006, we amended our Certificate of Incorporation to change our name to ImmunoCellular Therapeutics, Ltd. to reflect the disposition of our Spectral Molecular Imaging subsidiary and the acquisition of our cellular-based technology from Cedars-Sinai.

Our principal executive offices are located at 23622 Calabasas Road, Suite 300, Calabasas, California 91302, and our telephone number at that address is (818) 264-2300.

## SUMMARY OF THE OFFERING

<b>Units Offered</b>	5,000 Units, each consisting of (i) one share of Preferred Stock, (ii) 0.6 of a Series 1 Warrant to purchase one share of Preferred Stock, (iii) 0.6 of a Series 2 Warrant to purchase one share of Preferred Stock and (iv) 0.6 of a Series 3 Warrant to purchase one share of Preferred Stock.
<b>Description of Preferred Stock</b>	For additional information see “Description of the Securities We Are Offering — Preferred Stock.”
<b>Preferred Stock Outstanding Immediately Before this Offering</b>	None.
<b>Preferred Stock Outstanding Immediately After this Offering</b>	5,000 shares of Series B Preferred Stock.
<b>Certificate of Designation for Preferred Stock</b>	We intend to file a certificate of designation setting forth the preferences, rights and limitations, or “Certificate of Designation,” pertaining to the Preferred Stock with the Delaware Secretary of State. The Certificate of Designation will be controlling with regard to the preferences, rights and limitations of the Preferred Stock holders for all purposes.
<b>Ranking of Preferred Stock</b>	The Preferred Stock will rank senior to our Common Stock and other classes of capital stock with respect to dividend and redemption, unless the holders of a majority of the outstanding shares of Preferred Stock consent to the creation of parity stock or senior preferred stock.
<b>Dividends on Preferred Stock</b>	Holders of Preferred Stock are entitled to receive cumulative dividends at the rate of 8.0% per annum, payable quarterly on January 1, April 1, July 1 and October 1, beginning on the first such date after the original issue date and on each conversion date. We have the right to pay dividends in cash or in shares of Common Stock. If we do not have funds legally available to pay cash dividends and certain equity conditions are not met, at the election of the holder, such dividends accrete to and increase the outstanding stated value of the Preferred Stock.
<b>Conversion Price</b>	The Preferred Stock is convertible into shares of Common Stock by dividing the stated value of the Preferred Stock by the conversion price. The conversion price is equal to the lesser of (a) \$ per share of Common Stock, referred to as the “Set Price,” subject to certain adjustments, and (b) 87.5% of the lowest volume weighted average price for our Common Stock as reported at the close of trading on the market reporting trade prices for the Common Stock during the ten trading days ending on, and including, the date of the notice of conversion, subject to adjustment as provided for in the Certificate of Designation. The conversion price is subject to a floor of \$0.35, except in the event of anti-dilution adjustments.
<b>Mandatory Conversion</b>	Subject to certain equity conditions, each share of Preferred Stock outstanding on the twelve-month anniversary of the applicable date of issuance will be automatically converted into shares of Common Stock at the conversion price described above.
<b>Series 1 Warrant Terms</b>	Each Unit contains 0.6 of a Series 1 Warrant to purchase one share of Preferred Stock at an exercise price equal to \$1,000. Each Series 1 Warrant will be immediately exercisable and will expire on the three-month anniversary of the original issuance date. The Series 1 Warrants will be issued in certificated form. See “Description of the Securities We Are Offering —Warrants.”
<b>Series 2 Warrant Terms</b>	Each Unit contains 0.6 of a Series 2 Warrant to purchase one share of Preferred Stock at an exercise price equal to \$1,000. Each Series 2 Warrant will be immediately exercisable and will expire on the six-month anniversary of the original issuance date. The Series 2 Warrants will be issued in certificated form. See “Description of the Securities We Are Offering —Warrants.”
<b>Series 3 Warrant Terms</b>	Each Unit contains 0.6 of a Series 3 Warrant to purchase one share of Preferred Stock at an exercise price equal to \$1,000. Each Series 3 Warrant will be immediately exercisable and will expire on the twelve-month anniversary of the original issuance date. The Series 3 Warrants will be issued in certificated form. See “Description of the Securities We Are Offering —Warrants.”

<b>Use of Proceeds</b>	We expect to use approximately \$3.8 million of the net proceeds from this offering to reduce outstanding accounts payable balances and for restructuring costs for transitioning to the immune-oncology research program. Following the payments described above, we expect that the net proceeds from this offering available to fund our operations will be approximately \$400,000. We currently intend to use such proceeds to continue our Stem-to-T-cell research program and for working capital and general corporate purposes as we work to evaluate strategic alternatives for our immuno-oncology research and development pipeline and technology platform, which may include a potential merger, consolidation, reorganization or other business combination, as well as the sale of the company or the company's assets. We may use a portion of the net proceeds of this offering to acquire additional technologies.
<b>Risk Factors</b>	See "Risk Factors" beginning on page 6 of this prospectus, as well as other information included in this prospectus, for a discussion of factors you should read and consider carefully before investing in our securities.
<b>Market Symbol and Trading</b>	Our Common Stock is listed on the NYSE MKT under the symbol "IMUC." We do not intend to list the Units, the Preferred Stock or the Warrants on the NYSE MKT, any other national securities exchange or any other nationally recognized trading system.
<b>Common Stock Outstanding Immediately After This Offering</b>	10,846,335 shares, based on 7,397,260 shares of Common Stock issuable upon the conversion of the Preferred Stock, assuming a conversion price of \$0.73, which is equal to 87.5% of the lowest volume weighted average trading price of the Common Stock during the ten trading days ending June 21, 2017, and excludes the Common Stock underlying the Warrants offered by this prospectus, based on their respective initial exercise prices.

The number of shares of our Common Stock to be outstanding after this offering as shown above is based on 3,449,075 shares issued and outstanding as of March 31, 2017 and excludes as of that date:

- 156,415 shares of our Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$43.21 per share;
- 7,862 shares of our Common Stock issuable upon the settlement of outstanding restricted stock units;
- 1,673,103 shares of our Common Stock issuable upon exercise of outstanding warrants at a weighted average exercise price of \$17.20 per share (without giving effect to any of the anti-dilution adjustment provisions thereof);
- 201,697 shares of our Common Stock to be reserved for potential future issuance pursuant to our 2016 Equity Incentive Plan; and
- 15,000 shares of our Common Stock held in escrow pursuant to a preferred stock purchase agreement dated December 3, 2009 with Socius Capital Group, LLC.

The number of shares of our Common Stock to be outstanding immediately after this offering as shown above does not include up to approximately \$14.3 million of shares of our Common Stock that remained available for sale at March 31, 2017 under our Controlled Equity Offering<sup>SM</sup> Sales Agreement (Sales Agreement) with Cantor Fitzgerald & Co., as agent. Between March 31, 2017 and the date of this prospectus, no shares were sold under the Sales Agreement.

## RISK FACTORS

*Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risks described under the heading “Risk Factors” in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2017, as filed with the SEC on May 15, 2017, which descriptions are incorporated in this prospectus by reference in its entirety and the risks described below, and other information in this prospectus before deciding to invest in or maintain your investment in our company. The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our Common Stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section below titled “Cautionary Statement Regarding Forward-Looking Statements.”*

### Risks Related To Our Business

***The estimated cost of completing the development of any of our current immunotherapy product candidates and of obtaining all required regulatory approvals to market any of those product candidates is substantially greater than the amount of funds we currently have available. Even if this offering is successful, we expect to use most or substantially all of the proceeds to pay creditors and to implement the change to our business focused on the stem-to-t-cell research and platform and will not have enough cash resources to fund the business for the next 4 months from the filing of this prospectus, and we will need to raise additional capital to continue future operations, which additional capital may not be available on acceptable terms or at all.***

As of March 31, 2017, we had working capital of \$4,979,015, compared to working capital of \$10,175,846 as of December 31, 2016. The estimated cost of completing the development of any of our current immunotherapy product candidates and of obtaining all required regulatory approvals to market any of those product candidates is substantially greater than the amount of funds we currently have available. In June 2017, we announced that we had determined that we were unable to secure sufficient additional financial resources to complete the phase 3 registration trial of ICT-107. As a result, we have suspended further patient randomization in the ICT-107 trial while we continue to seek a collaborative arrangement or acquisition of our ICT-107 program. Even though the suspension of the phase 3 registration trial of ICT-107 is expected to reduce the amount of cash used in our operations, we do have enough cash resources to fund the business for the next 12 months from the filing of this prospectus. Successful completion of our research and development activities, and our transition to attaining profitable operations, is dependent upon obtaining financing. Assuming we successfully close this offering, we expect that we will have sufficient cash to fund our operations for approximately three months assuming no revenue generation and a timely wind down of our ICT-107 program. Additional financing may not be available on acceptable terms or at all. If we issue additional equity securities to raise funds, the ownership percentage of existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of Common Stock. If we cannot raise funds, we might be forced to make substantial reductions in the on-going clinical trials, thereby damaging our reputation in the biotech and medical communities which could adversely affect our ability to implement our business plan and our viability. If we cannot raise additional funds, we may be required to defer, reduce or eliminate significant planned expenditures, restructure, curtail or eliminate some or all of our development programs or other operations, dispose of technology or assets, pursue an acquisition of our company by a third party at a price that may result in a loss on investment for our stockholders, enter into arrangements that may require us to relinquish rights to certain of our product candidates, technologies or potential markets, file for bankruptcy or cease operations altogether. Any of these events could damage our reputation in the biotech and medical communities which could adversely affect our ability to implement our business plan and our viability, and could have a material adverse effect on our business, financial condition and results of operations. Moreover, if we are unable to obtain additional funds on a timely basis, there will be substantial doubt about our ability to continue as a going concern and increased risk of insolvency and loss of investment by our stockholders.

### Risks Related to the Offering

***Management will have broad discretion as to the use of the net proceeds from this offering, and we may not use these proceeds effectively.***

We currently intend to use the proceeds of this offering: to reduce our current accounts payable balances, to wind down our phase 3 clinical trial of ICT-107, to continue our Stem-to-T-cell research program and for working capital and general corporate purposes as we work to evaluate strategic alternatives for our immunology research and development pipeline and technology platform, which may include a potential merger, consolidation, reorganization or other business combination, as

well as the sale of the company or the company's assets. We may also use a portion of the net proceeds of this offering to acquire additional technologies. Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our Common Stock. In June 2017, we announced that we had determined that we were unable to secure sufficient additional financial resources to complete the phase 3 registration trial of ICT-107, which was previously our lead product candidate. As a result, we have suspended further patient randomization in the ICT-107 trial while we continue to seek a collaborative arrangement or acquisition of our ICT-107 program. Given our limited financing options, we are undertaking an evaluation of strategic alternatives for our immuno-oncology research and development pipeline and technology platform, which may include a potential merger, consolidation, reorganization or other business combination, as well as the sale of the company or the company's assets. While we evaluate strategic alternatives, we plan to continue to advance our research and development strategies. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates and cause the price of our Common Stock to decline.

***Investors in this offering will experience immediate and substantial dilution.***

Since the public offering price per share of the Units offered pursuant to this prospectus is expected to be substantially higher than the net tangible book value per share of our Common Stock, you will suffer immediate and substantial dilution in the net tangible book value of the Common Stock underlying the Preferred Stock and Preferred Stock underlying the Warrants from the price per Unit that you pay in this offering. Our net tangible book value as of March 31, 2017 was approximately \$262,300, or \$0.08 per share. After giving effect to the assumed sale by us of 5,000 Units in this offering at a public offering price of \$1,000 per Unit (and an assumed Conversion Price of \$0.73 per share, which is equal to 87.5% of the lowest volume weighted average trading price of the Common Stock during the ten trading days ending June 21, 2017), and after deducting underwriting discounts, original issue discounts, commissions and other estimated offering expenses payable by us, and allocating approximately \$2.6 million of the proceeds to the Warrants and deducting approximately \$184,000 from our pro-forma net equity to account for the increase in the liability associated with the revaluation of our existing warrant derivatives, you will suffer immediate dilution of \$0.58 per share in the net tangible book value of the Common Stock you acquire. In the event that you exercise the Warrants, you will experience additional dilution. See the section titled "Dilution" below for a more detailed discussion of the dilution you would incur if you purchase Units in this offering.

In addition, we have a significant number of stock options and warrants outstanding. To the extent that outstanding stock options or warrants, including the Warrants offered in this prospectus, have been or may be exercised or other shares issued, you may experience further dilution.

***The offering price determined for this offering is not an indication of our value.***

The per-Unit offering price and the initial conversion price of the Preferred Stock and the initial exercise price of the Warrants may not necessarily bear any relationship to the book value of our assets, past operations, cash flows, losses, financial condition or any other established criteria for value. You should not consider the offering price for the Units as an indication of the value of the Common Stock underlying the Preferred Stock and the Warrants. After the date of this prospectus, the Common Stock may trade at prices above or below the price per share of Common Stock imputed by the offering price.

***Future sales of substantial amounts of our Common Stock could adversely affect the market price of our Common Stock.***

We may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. If additional capital is raised through the sale of equity or convertible debt securities, or perceptions that those sales could occur, the issuance of these securities could result in further dilution to investors purchasing our Common Stock in this offering or result in downward pressure on the price of our Common Stock, and our ability to raise capital in the future.

***The exercise of outstanding options and warrants to acquire shares of our Common Stock would cause additional dilution, which could cause the price of our Common Stock to decline.***

In the past, we have issued options and warrants to acquire shares of our Common Stock. At March 31, 2017, there were 156,415 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$43.21 per share and 1,673,103 shares of Common Stock issuable upon exercise of outstanding warrants at a weighted average exercise price of \$17.20 per share, and we may issue additional options, warrants and other types of equity in the future as part of stock-based compensation, capital raising transactions, technology licenses, financings, strategic licenses or other strategic transactions. To the extent these options and warrants are ultimately exercised, existing holders of our Common Stock would experience additional dilution which may cause the price of our Common Stock to decline.

***Securities analysts may not continue to cover our Common Stock, and this may have a negative impact on our Common Stock's market price.***

The trading market for our Common Stock depends, in part, on the research and reports that securities analysts publish about us and our business. We do not have any control over these analysts. If our stock is downgraded by a securities analyst, our stock price would likely decline. If the analyst ceases to cover us or fails to publish regular reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

***Anti-takeover provisions in our charter documents and under Delaware law may make an acquisition of us, which may be beneficial to our stockholders, more difficult.***

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us, even if doing so would benefit our stockholders. These provisions:

- establish that members of our board of directors may be removed upon an affirmative vote of stockholders owning a majority of our capital stock
- authorize the issuance of “blank check” preferred stock that could be issued by our board of directors to increase the number of outstanding shares and thwart a takeover attempt;
- limit who may call a special meeting of stockholders;
- establish advance notice requirements for nominations for election to our board of directors; and
- provide that the authorized number of directors may be changed by a resolution of our board of directors, provided that the number is within the limits established by the bylaws.

In addition, Section 203 of the Delaware General Corporation Law, which imposes certain restrictions relating to transactions with major stockholders, may discourage, delay or prevent a third party from acquiring us.

#### **Risks Related to the Units, the Preferred Stock and the Warrants.**

***There is no public market for the Units, the Preferred Stock, the Series 1 Warrants, the Series 2 Warrants or the Series 3 Warrants.***

There is no established public trading market for the Units, the Preferred Stock, the Series 1 Warrants, the Series 2 Warrants or the Series 3 Warrants offered by this prospectus and we do not expect a market to develop. In addition, we do not intend to apply to list the Units, the Preferred Stock, the Series 1 Warrants, the Series 2 Warrants or the Series 3 Warrants on any national securities exchange or other nationally recognized trading system, including the NYSE MKT. Without an active market, the liquidity of the Units, the Preferred Stock, the Series 1 Warrants, the Series 2 Warrants and the Series 3 Warrants will be limited.

***As a holder of the Preferred Stock or Warrants, you have no voting rights.***

You will have no voting rights as a holder of the Preferred Stock, Series 1 Warrants, Series 2 Warrants or the Series 3 Warrants. Our Common Stock is currently the only class of our securities that carries full voting rights.

Until you acquire shares of our common stock upon the conversion of your preferred stock or exercise of your warrants, you will have no rights with respect to shares of our common stock issuable upon conversion of your preferred stock or exercise of your warrants. Upon conversion of your preferred stock or exercise of your warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

***We may lose our current NYSE MKT listing of our common stock and may not be eligible to list our common stock on other exchanges. If we are unable to maintain compliance with NYSE MKT continued listing standards and policies, the NYSE MKT may commence proceedings to delist our common stock, and in some cases, determine to suspend trading in our common stock immediately without an opportunity to propose a plan that could enable us to regain compliance, which would likely cause the liquidity and market price of our common stock to decline and you could lose your investment.***

Our common stock currently trades on the NYSE MKT under the symbol IMUC. If we fail to adhere to the NYSE MKT’s strict listing criteria, our stock may be delisted. For example, on June 23, 2017, we were notified by the NYSE MKT that the Company is not in compliance with Section 1003(a)(iii) of the NYSE MKT Company Guide (requiring stockholders’ equity of \$6 million or more if the Company has reported losses from continuing operations and/or net losses in its five most recent fiscal years). As of March 31, 2017, the Company had stockholders’ equity of \$478,725. Accordingly, the Company has become subject to the procedures and requirements of Section 1009 of the NYSE MKT Company Guide and must submit a plan of compliance by July 23, 2017 addressing how the Company intends to regain compliance with Section 1003(a)(iii) of the NYSE MKT Company Guide by December 23, 2018. The Company intends to submit a plan to regain compliance with NYSE MKT

listing standards. If the Company does not regain compliance with those standards, or does not make progress consistent with the plan, the NYSE MKT staff may commence delisting proceedings.

If our common stock is delisted from the NYSE MKT, it could potentially impair the liquidity of our securities not only in the number of shares that could be bought and sold at a given price, which might be depressed by the relative illiquidity, but also through delays in the timing of transactions and the potential reduction in media coverage. As a result, an investor might find it more difficult to dispose of our common stock. We believe that current and prospective investors would view an investment in our common stock more favorably if it continues to be listed on the NYSE MKT.

***If our Common Stock is delisted, your ability to transfer or sell the Preferred Stock or Warrants may be limited and the market value of the Preferred Stock or Warrants will likely be materially adversely affected.***

We expect that, to some extent, the value of the Preferred Stock, Series 1 Warrants, Series 2 Warrants or the Series 3 Warrants will be tied to the perceived value of their conversion and exercise features. If our Common Stock is delisted from the NYSE MKT, your ability to transfer or sell the Preferred Stock, Series 1 Warrants, Series 2 Warrants or the Series 3 Warrants may be limited and the market value of the Preferred Stock, Series 1 Warrants, Series 2 Warrants and the Series 3 Warrants will likely be materially adversely affected.

***We expect that the market value of the Preferred Stock and Warrants will be significantly affected by changes in the market price of our Common Stock, which could change substantially at any time.***

We expect that the market value of the Preferred Stock and Warrants will depend on a variety of factors, including, without limitation, the market price of our Common Stock. Each of these factors may be volatile, and may or may not be within our control. For example, we expect the market value of the Preferred Stock and Warrants will increase with increases in the market price of our Common Stock. The market price of the Common Stock has been volatile in the past and could fluctuate widely in response to various factors.

***We may issue additional shares of our Common Stock or instruments convertible or exercisable into our Common Stock, including in connection with exercise of the Preferred Stock and the Warrants, and thereby materially and adversely affect the market price of our Common Stock, and, in turn, the market value of the Preferred Stock and the Warrants.***

Subject to certain contractual limitations, under the Certificate of Designation and Underwriting Agreement, we are under, we may offer and sell additional shares of our Common Stock or other securities convertible into or exercisable for our Common Stock during the life of the Preferred Stock and the Warrants. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our Common Stock. If we issue additional shares of our Common Stock or instruments convertible or exercisable into our Common Stock, it may materially and adversely affect the price of our Common Stock and, in turn, the market value of the Preferred Stock and the Warrants. Furthermore, the conversion or exercise of some or all of our outstanding derivative securities, including the Preferred Stock and the Warrants, will dilute the ownership interests of existing stockholders, and any sales in the public market of shares of our Common Stock issuable upon any such conversion or exercise could adversely affect prevailing market prices of our Common Stock or the market value of the Preferred Stock and the Warrants.

***Holders of the Preferred Stock and the Warrants will be entitled to only limited rights with respect to our Common Stock, and will be subject to all changes made with respect to our Common Stock to the extent holders receive shares of Common Stock pursuant to the terms of the Preferred Stock and the Warrants.***

Holders of the Preferred Stock and the Warrants will be entitled to only limited rights with respect to our Common Stock until the time at which they become holders of our Common Stock pursuant to the terms of the Preferred Stock and the Warrants, but will be subject to all changes affecting our Common Stock before that time. For example, if an amendment is proposed to our articles of incorporation requiring stockholder approval and the record date for determining the stockholders of record entitled to vote on the amendment occurs before the date you are deemed to be a record holder of our Common Stock, you generally will not be entitled to vote on the amendment, although you will nevertheless be subject to any changes affecting our Common Stock.

***A large number of shares issued in this offering may be sold in the market following this offering, which may depress the market price of our common stock.***

A large number of shares that are issuable upon conversion of the Preferred Stock or exercise of the Warrants may be sold in the market following this offering, which may depress the market price of our common stock. Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. If there are more shares of our common stock offered for sale than buyers are willing to purchase, then the market price of our common stock may decline to a market price at which buyers are willing to purchase the offered shares of our common stock and sellers remain willing to sell the shares. All of the securities issued in the offering will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended (Securities Act).

***To the extent we issue shares of our Common Stock to satisfy all or a portion of our conversion or exercise obligations, conversion of the Preferred Stock will dilute the ownership interest of our existing stockholders, including holders who had previously converted their Preferred Stock.***

Issuance of shares of Common Stock upon conversion of the Preferred Stock will dilute the ownership interest of our existing stockholders. Further, any sales in the public market of our Common Stock issuable upon such exercise could adversely affect prevailing market prices of our Common Stock. In addition, the existence of the Preferred Stock and Warrants may encourage short selling by market participants because the conversion of the Preferred Stock could depress the price of our Common Stock.

***You may receive less valuable consideration than expected because the value of our Common Stock may decline after you convert the Preferred Stock or exercise the Warrants issued in this offering, but before we settle our obligation thereunder.***

A converting or exercising holder will be exposed to fluctuations in the value of our Common Stock during the period from the date such holder converts the Preferred Stock or surrenders the Warrants for exercise until the date we settle our exercise obligation. Upon conversion of the Preferred Stock and exercise of the Warrants, we will be required to deliver the shares of our Common Stock, on the third business day following the relevant conversion or exercise date. Accordingly, if the price of our Common Stock decreases during this period, the value of the shares that you receive will be adversely affected and would be less than the value on the exercise date.

***If we explore or engage in future business combinations or other transactions, we may be subject to various uncertainties and risks.***

From time-to-time, unrelated third-parties approach the Company about potential transactions, including business combinations. Recently, we have had preliminary discussions with one such third party to explore, among other things, a potential business combination. We have not, however, completed a review of matters that would be required prior to entering into any such transaction such as due diligence, negotiating and agreeing upon terms and obtaining approval from our board of directors. As such, to date, we have not entered into any agreements related to any business combination. While we may explore such opportunities when they arise, we could not pursue any proposed business combination or other transaction unless our board of directors first has determined that doing so would be in our and our stockholders' interest. There can be no assurance that we will negotiate acceptable terms, enter into binding agreements or successfully consummate any business combination or other transaction with this private company or any other third parties.

We cannot currently predict the effects a future, potential business combination or other transaction would have on holders of the Preferred Stock, Warrants or any of our other securities. There are various uncertainties and risks relating to our evaluation and negotiation of possible business combination or other transactions, our ability to consummate such transactions and the consummation of such transactions, including:

- evaluation and negotiation of a proposed transaction may distract management from focusing our time and resources on execution of our operating plan, which could have a material adverse effect on our operating results and business;
- the process of evaluating proposed transactions may be time consuming and expensive and may result in the loss of business opportunities;
- perceived uncertainties as to our future direction may result in increased difficulties in retaining key employees and recruiting new employees, particularly senior management;
- even if our board of directors negotiates a definitive agreement, successful integration or execution of a business combination or other transaction will be subject to additional risks;
- the current market price of our Common Stock may reflect a market assumption that a transaction will occur, and during the period in which we are considering a transaction, the market price of our Common Stock could be highly volatile;
- a failure to complete a transaction could result in a negative perception by our investors generally and could cause a decline in the market price of our Common Stock, as well as lead to greater volatility in the market price of our Common Stock, all of which could adversely affect our ability to access the equity and financial markets, as well as our ability to explore and enter into different strategic alternatives;
- expected benefits may not be successfully achieved;



- such transactions may increase our operating expenses and cash requirements, cause us to assume or incur indebtedness or contingent liabilities, make it difficult to retain management and key personnel; and
- dilution of our existing stockholders if such transaction involves our issuing dilutive securities.

## CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements, which reflect the views of our management with respect to future events and financial performance. These forward-looking statements are subject to a number of uncertainties and other factors that could cause actual results to differ materially from such statements. Forward-looking statements are identified by words such as “anticipates,” “believes,” “estimates,” “expects,” “intends,” “plans,” “projects,” “targets” and similar expressions. Readers are cautioned not to place undue reliance on these forward-looking statements, which are based on the information available to management at this time and which speak only as of this date. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. For a discussion of some of the factors that may cause actual results to differ materially from those suggested by the forward-looking statements, please read carefully the information under “Risk Factors.” Examples of our forward-looking statements include:

- our current views with respect to our business strategy, business plan and research and development activities;
- the progress of our product development programs, including clinical testing and the timing of commencement and results thereof;
- our projected research and development expenses;
- our ability to wind down the phase 3 study of ICT-107;
- our ability to continue development plans for our Stem-to-T-Cell program, ICT-140 and ICT-121;
- our ability to pursue strategic alternatives, including for our immuno-oncology research and development pipeline and technology platform;
- our ability to enter into a strategic collaboration with Memgen;
- our anticipated use of proceeds from this offering; and
- our ability to further develop our technologies into product candidates.

The identification in this document of factors that may affect future performance and the accuracy of forward-looking statements is meant to be illustrative and by no means exhaustive. All forward-looking statements should be evaluated with the understanding of their inherent uncertainty. You may rely only on the information contained in this prospectus.

We have not authorized anyone to provide information different from that contained in this prospectus. Neither the delivery of this prospectus nor the sale of securities means that information contained in this prospectus is correct after the date of this prospectus. This prospectus is not an offer to sell or solicitation of an offer to purchase these securities in any circumstances under which the offer or solicitation is unlawful.

## USE OF PROCEEDS

Assuming that all 5,000 Units are sold in this offering, we estimate that our net proceeds from this offering will be approximately \$4.2 million, excluding the proceeds, if any, from the exercise of the Warrants, based on the assumed public offering price of \$1,000 per Unit and after deducting underwriting discounts, commissions and other estimated offering expenses payable by us.

We expect to use approximately \$3.8 million of the net proceeds from this offering to reduce outstanding accounts payable balances and for restructuring costs for transitioning to the immuno-oncology research program. We currently have approximately \$3.0 million outstanding accounts payable balances as of May 31, 2017.

Following the payments described above, we expect that the net proceeds from this offering available to fund our operations will be approximately \$400,000. We currently intend to use such proceeds as follows:

- approximately \$100,000 to continue our Stem-to-T-cell research program; and
- approximately \$300,000 for working capital and general corporate purposes as we work to evaluate strategic alternatives for our immuno-oncology research and development pipeline and technology platform, which may include a potential merger, consolidation, reorganization or other business combination, as well as the sale of the company or the company's assets.

We may also use a portion of the net proceeds to acquire or invest in businesses, products and technologies that are complementary to our own, although we are not currently planning or negotiating any such transactions. Pending these uses, we intend to invest our net proceeds from this offering primarily in investment grade, interest-bearing instruments. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds we will have upon completion of the offering. Accordingly, we will retain broad discretion over the use of these proceeds.

## MARKET PRICE OF OUR COMMON STOCK

### Market Information

Our Common Stock has been traded on the NYSE MKT since May 30, 2012 under the symbol “IMUC.” Our Common Stock previously traded on the OTC Bulletin Board over-the-counter market. The price information in the table below for periods prior to the listing of our Common Stock on the NYSE MKT reflects inter-dealer prices, without retail mark-up, mark-down or commission and may not represent actual transactions:

Quarter Ended	High	Low
March 31, 2015	\$ 32.81	\$ 19.20
June 30, 2015	\$ 21.60	\$ 17.06
September 30, 2015	\$ 25.40	\$ 14.00
December 31, 2015	\$ 21.20	\$ 13.61
March 31, 2016	\$ 15.03	\$ 8.07
June 30, 2016	\$ 13.60	\$ 8.07
September 30, 2016	\$ 10.60	\$ 4.44
December 31, 2016	\$ 4.80	\$ 1.83
March 31, 2017	\$ 4.27	\$ 1.85
June 30, 2017 (through July 5, 2017)	\$ 3.12	\$ 0.80

The reported last sale price of our Common Stock on the NYSE MKT on July 5, 2017 was \$1.70 per share.

### Stockholders

As of July 5, 2017, there were 36 holders of record of our Common Stock, not including any persons who hold their stock in “street name.”

### DIVIDEND POLICY

We have not paid any dividends on our Common Stock to date and do not anticipate that we will pay dividends on our Common Stock in the foreseeable future. Any payment of cash dividends on our Common Stock in the future will be dependent upon the amount of funds legally available, our earnings, if any, our financial condition, our anticipated capital requirements and other factors that the board of directors may think are relevant.

## DILUTION

If you purchase securities in this offering, you will experience dilution to the extent of the difference between the price per Unit you pay in this offering and the net tangible book value per share of our Common Stock underlying the Preferred Stock, and will be further diluted assuming the Series 1 Warrants, Series 2 Warrants and the Series 3 Warrants are accounted for as derivatives and classified as liabilities. The net tangible book value of our Common Stock on March 31, 2017 was \$262,300 or \$0.08 per share (based upon 3,449,075 shares of our Common Stock outstanding). Net tangible book value per share is equal to the amount of our total tangible assets, less total liabilities, divided by the aggregate number of shares of our Common Stock outstanding.

After giving effect to the assumed sale in this offering by us of 5,000 Units at a public offering price of \$1,000 per Unit (assuming a Conversion Price of \$0.73 per share) and after deducting underwriting discounts, original issue discounts, commissions and other estimated offering expenses payable by us, and allocating approximately \$2.6 million of the proceeds to the Series 1 Warrants, the Series 2 Warrants and the Series 3 Warrants and deducting approximately \$184,000 to account for the estimated increase in the liability associated with the revaluation of our existing warrant derivatives, our as adjusted net tangible book value as of March 31, 2017 would have been approximately \$1.6 million, or \$0.15 per share of Common Stock. This represents an immediate increase in tangible net book value of \$0.07 to existing stockholders and an immediate dilution of \$0.58 per share to new investors purchasing Units in this offering. The following table illustrates this per share dilution:

Assumed public offering price per share (assumed conversion of Preferred Stock as described above)	\$ 0.73
Net tangible book value per share as of March 31, 2017	\$ 0.08
Increase per share attributable to new investors in this offering	<u>0.07</u>
As adjusted net tangible book value per share as of March 31, 2017 after giving effect to this offering	<u>0.15</u>
Dilution per share to investors participating in this offering	<u>\$ 0.58</u>

The discussion and table above assume (i) the sale by us of 5,000 Units, (ii) no exercise of the Warrants, and (iii) no receipt of cash upon the exercise of the Warrants. Upon the exercise of the Warrants and the conversion of the Preferred Stock underlying the Warrants, holders of the Warrants will experience additional dilution. The calculations above exclude shares of Common Stock issuable upon the outstanding derivative securities described in this Prospectus. The discussion and table above do not take into account further dilution to new investors that could occur upon the exercise of outstanding options and warrants having a per share exercise price less than the public offering price per share in this offering.

The number of shares of our outstanding Common Stock reflected in the discussion and table above is based on 3,449,075 shares of Common Stock issued and outstanding as of March 31, 2017 and excludes, as of that date:

- 156,415 shares of our Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$43.21 per share;
- 7,862 shares of our Common Stock issuable upon the settlement of outstanding restricted stock units;
- 1,673,103 shares of our Common Stock issuable upon exercise of outstanding warrants at a weighted average exercise price of \$17.20 per share (without giving effect to any of the anti-dilution adjustment provisions thereof);
- 201,697 shares of our Common Stock to be reserved for potential future issuance pursuant to our 2016 Equity Incentive Plan; and
- 15,000 shares of our Common Stock held in escrow pursuant to a preferred stock purchase agreement dated December 3, 2009 with Socius Capital Group, LLC.

If we raise additional capital in the future, we may in the future sell substantial additional amounts of Common Stock or securities convertible into or exercisable for Common Stock. We may also choose to raise additional capital due to market conditions or other strategic considerations even if we believe we have sufficient funds for our current or future operating plans. The issuance of these securities could result in further dilution to our shareholders.

The number of shares of our Common Stock to be outstanding immediately after this offering as shown above does not include up to approximately \$14.3 million of shares of our Common Stock that remained available for sale at March 31, 2017 under our Sales Agreement with Cantor Fitzgerald & Co., as agent. Between March 31, 2017 and the date of this prospectus, no shares were sold under the Sales Agreement.

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding beneficial ownership of our common stock as of June 21, 2017 (a) by each person known by us to own beneficially 5% or more of our common stock, (b) by each of our named executive officers as set forth in our proxy statement for our 2017 Annual Meeting of Stockholders and our directors and (c) by all our executive officers and directors as a group. Our calculation of the percentage of beneficial ownership prior to this offering is based on 3,449,075 shares of our common stock outstanding as of March 31, 2017. We have based our calculation of the percentage of beneficial ownership after this offering on 10,846,335 shares of our common stock outstanding immediately after the closing of this offering, assuming conversion of all shares of Preferred Stock at an assumed Conversion Price of \$0.73, which is equal to 87.5% of the lowest volume weighted average trading price of the Common Stock during the ten trading days ending June 21, 2017, and no exercise of the Warrants. Unless otherwise noted, we believe that all persons named in the table have sole voting and investment power with respect to all the shares beneficially owned by them.

Name and Address of Beneficial Owner <sup>(1)</sup>	Shares Beneficially Owned <sup>(2)</sup>	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
John S. Yu, M.D.	14,169 <sup>(3)</sup>	*	*
Anthony Gringeri, Ph.D.	18,561 <sup>(4)</sup>	*	*
David Fractor	8,301 <sup>(5)</sup>	*	*
Rahul Singhvi, Sc.D.	12,351 <sup>(6)</sup>	*	*
Steven J. Swanson, Ph.D.	7,239 <sup>(7)</sup>	*	*
Gary S. Titus	7,822 <sup>(8)</sup>	*	*
Gregg A. Lapointe	3,376 <sup>(9)</sup>	*	*
Mark A. Schlossberg	3,376 <sup>(10)</sup>	*	*
All executive officers and directors as a group (9 persons)	75,196 <sup>(11)</sup>	2.13%	0.69%

\* Less than 1%.

(1) The address of each of the persons shown is c/o ImmunoCellular Therapeutics, Ltd., 23622 Calabasas Road, Suite 300, Calabasas, California 91302.

(2) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and generally includes voting or investment power with respect to securities. Shares of common stock subject to options, warrants and convertible securities currently exercisable or convertible, or exercisable or convertible within 60 days of June 21, 2017, are deemed outstanding, including for purposes of computing the percentage ownership of the person holding such option, warrant or convertible security, but not for purposes of computing the percentage of any other holder.

(3) Includes 13,661 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017.

(4) Includes 12,265 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017 and warrants to purchase 525 shares of common stock.

(5) Includes 5,129 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017 and warrants to purchase 291 shares of common stock.

(6) Includes 11,976 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017.

(7) Includes 6,524 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017.

(8) Includes 7,122 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017.

(9) Includes 3,376 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017.

(10) Includes 3,376 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017.

(11) Includes 103,196 shares of common stock underlying stock options that are exercisable within 60 days of June 21, 2017 and warrants to purchase 1,539 shares of common stock.



## DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, our authorized capital stock consists of 50,000,000 shares of common stock, \$0.0001 par value, and 1,000,000 shares of preferred stock, \$0.0001 par value. A description of material terms and provisions of our amended and restated certificate of incorporation and amended and restated bylaws affecting the rights of holders of our capital stock is set forth below. The description is intended as a summary, and is qualified in its entirety by reference to our amended and restated certificate of incorporation and our amended and restated bylaws.

### Common Stock

The holders of our common stock are entitled to equal dividends and distributions per share with respect to the common stock when, as and if declared by our board of directors from funds legally available therefor. No holder of any shares of our common stock has a preemptive right to subscribe for any of our securities, nor are any common shares subject to redemption or convertible into other securities. Upon liquidation, dissolution or winding-up of our company, and after payment of creditors and preferred stockholders, if any, the assets will be divided pro rata on a share-for-share basis among the holders of the shares of our common stock. All shares of our common stock now outstanding are fully paid, validly issued and non-assessable. Each share of our common stock is entitled to one vote with respect to the election of any director or any other matter upon which stockholders are required or permitted to vote.

On November 18, 2016, we effected a one-for-forty reverse stock split of our common stock. Upon the effectiveness of the reverse stock split (i) every forty shares of our outstanding common stock was combined into one share of common stock, (ii) the number of shares of common stock for each outstanding option or warrant to purchase common stock is exercisable was proportionately adjusted, and (iii) the exercise price of each outstanding option or warrant to purchase common stock was proportionately increased.

### Preferred Stock

Our board of directors is authorized, subject to limitations prescribed by Delaware law, to issue up to 1,000,000 shares preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors can also increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with financings, possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, discouraging or preventing a change in control of our company, may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock, and may reduce the likelihood that common stockholders will receive dividend payments and payments upon liquidation.

### Warrants

#### *October 2012 Warrants*

The following summary description of the material features of the outstanding warrants that we issued in October 2012 is general and is qualified in its entirety by reference to the form of warrant, a copy of which has been filed with the SEC as an exhibit to the registration statement of which this prospectus is a part. See “Where You Can Find More Information.”

Each warrant represents the right to purchase shares of our common stock at an exercise price of \$106.00 per share. Each warrant may be exercised after the date of issuance through and including the date that is five years after the date the warrant is first exercisable.

*Exercise.* The warrants may be exercised on or prior to the expiration date at the offices of the warrant agent, with the delivery of a written notice in the form attached to the warrant completed and executed as indicated, accompanied by full payment of the exercise price for the number of warrants being exercised in the form discussed below. Within three trading days, certificates representing the shares of our common stock purchased will be delivered to the warrant holder, or at the warrant holder's request, the warrant shares will be credited to the warrant holder's account with the Depository Trust Company. The warrants may be exercised in whole or in part.

*Payment.* The holder shall pay the exercise price in immediately available funds; provided, however, if at any time there is (i) no effective registration statement registering the relevant common stock and (ii) no effective registration statement registering the resale of or no current prospectus available for the resale of the relevant common stock by the holder, the holder may elect to satisfy its obligation to pay the exercise price through a "cashless exercise."

*Fractional Shares.* No fractional shares will be issued upon exercise of the warrants. If, upon exercise of the warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

*Limitations on Exercise.* The number of shares of our common stock that may be acquired by a holder upon any exercise of a warrant shall be limited so that the total number of shares of our common stock then beneficially owned by such holder does not exceed 4.99% (subject to increase, not to exceed 9.99%, in certain circumstances) of the total number of issued and outstanding shares of our common stock (including for such purpose the shares of our common stock issuable upon such exercise). Our obligation to issue shares of our common stock upon the exercise of a warrant shall be suspended until such time, if any, as shares of common stock may be issued in compliance with such limitation.

*Adjustment.* The exercise price and the number of shares underlying the warrants are subject to appropriate adjustment in the event of stock splits, stock dividends on our common stock, stock combinations or similar events affecting our common stock. In addition, in the event we consummate any merger, consolidation, sale or other reorganization event in which our common stock is converted into or exchanged for securities, cash or other property, then following such event, the holders of the warrants will be entitled to receive upon exercise of such warrants the kind and amount of securities, cash or other property which the holders would have received had they exercised such warrants immediately prior to such reorganization event.

*Rights as Stockholders.* The warrant holders do not have the rights or privileges of holders of our common stock and any voting rights until they exercise their warrants and receive shares of our common stock. After the issuance of shares of our common stock upon exercise of the warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

### **February 2015 Warrants**

The following summary description of the material features of the outstanding warrants that we issued in February 2015 is general and is qualified in its entirety by reference to the form of warrant, a copy of which has been filed with the SEC as an exhibit to the registration statement of which this prospectus is a part. See "Where You Can Find More Information."

Each warrant represents the right to purchase one share of our common stock at an exercise price of \$20.00 per share. Each warrant may be exercised after the date of issuance through and including the date that is five years after the date the warrant is first exercisable.

*Exercise.* The warrants may be exercised on or prior to the expiration date at the offices of the warrant agent, with the delivery of a written notice in the form attached to the warrant completed and executed as indicated, accompanied by full payment of the exercise price for the number of warrants being exercised in the form discussed below. Within three trading days, certificates representing the shares of our common stock purchased will be delivered to the warrant holder, or at the warrant holder's request, the warrant shares will be credited to the warrant holder's account with the Depository Trust Company. The warrants may be exercised in whole or in part.

*Payment.* The holder shall pay the exercise price in immediately available funds; provided, however, if at any time there is (i) no effective registration statement registering the relevant common stock and (ii) no effective registration statement registering the resale of or no current prospectus available for the resale of the relevant common stock by the holder, the holder may elect to satisfy its obligation to pay the exercise price through a “cashless exercise.”

*Fractional Shares.* No fractional shares will be issued upon exercise of the warrants. If, upon exercise of the warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

*Limitations on Exercise.* The number of shares of our common stock that may be acquired by a holder upon any exercise of a warrant shall be limited so that the total number of shares of our common stock then beneficially owned by such holder does not exceed 4.99% (subject to increase, not to exceed 9.99%, in certain circumstances) of the total number of issued and outstanding shares of our common stock (including for such purpose the shares of our common stock issuable upon such exercise). Our obligation to issue shares of our common stock upon the exercise of a warrant shall be suspended until such time, if any, as shares of common stock may be issued in compliance with such limitation.

*Adjustment.* The exercise price and the number of shares underlying the warrants are subject to appropriate adjustment in the event of stock splits, stock dividends on our common stock, stock combinations or similar events affecting our common stock. The warrants provide for a weighted-average adjustment to the exercise price if we issue or are deemed to issue additional shares of our common stock at a price per share less than the then effective exercise price of the warrants, subject to certain exceptions. In addition, in the event of any fundamental transaction, as described in the warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of a warrant, the holder will have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of our common stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the warrant is exercisable immediately prior to such event. In addition, in the event of a fundamental transaction, we or any successor entity will be required to purchase at a holder’s option, exercisable at any time concurrently with or within thirty (30) days after the consummation of the fundamental transaction, such holder’s warrants for cash in an amount equal to the value of the unexercised portion of such holder’s warrants, determined in accordance with the Black Scholes option pricing model as specified in the warrants.

*Rights as Stockholders.* The warrant holders do not have the rights or privileges of holders of our common stock and any voting rights until they exercise their warrants and receive shares of our common stock. After the issuance of shares of our common stock upon exercise of the warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

#### ***August 2016 Warrants***

The following summary description of the material features of the outstanding base warrants and pre-funded that we issued in August 2016 is general and is qualified in its entirety by reference to each form of warrant, copies of which has been filed with the SEC as an exhibit to the registration statement of which this prospectus is a part. See “Where You Can Find More Information.”

Each base warrant represents the right to purchase one share of our common stock at an exercise price of \$7.68 per share. Each pre-funded warrant represents the right to purchase one share of our common stock at an exercise price of \$0.40 per share. Each warrant may be exercised after the date of issuance through and including the date that is five years after the date the warrant is first exercisable.

*Exercise.* The warrants may be exercised on or prior to the expiration date at the offices of the warrant agent, with the delivery of a written notice in the form attached to the warrant completed and executed as indicated, accompanied by full payment of

the exercise price for the number of warrants being exercised in the form discussed below. Within three trading days, certificates representing the shares of our common stock purchased will be delivered to the warrant holder, or at the warrant holder's request, the warrant shares will be credited to the warrant holder's account with the Depository Trust Company. The warrants may be exercised in whole or in part.

*Payment.* The holder shall pay the exercise price in immediately available funds; provided, however, if at any time there is (i) no effective registration statement registering the relevant common stock and (ii) no effective registration statement registering the resale of or no current prospectus available for the resale of the relevant common stock by the holder, the holder may elect to satisfy its obligation to pay the exercise price through a "cashless exercise."

*Fractional Shares.* No fractional shares will be issued upon exercise of the warrants. If, upon exercise of the warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

*Limitations on Exercise.* A holder (together with its affiliates) may not exercise any portion of a base warrant or pre-funded warrant to the extent that the holder would own more than 4.99% of the outstanding common stock after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase or decrease the amount of ownership of outstanding stock after exercising the holder's warrants, as applicable, up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the warrants. No fractional shares of common stock will be issued in connection with the exercise of a warrant. In lieu of fractional shares, we will round down to the next whole share.

*Adjustment.* The exercise price of the base warrants is subject to weighted-average adjustment to the exercise price if we issue or are deemed to issue additional shares of our common stock at a price per share less than the then effective exercise price. For purposes of these adjustments, dilutive issuances do not include (i) up to \$15,000,000, in the aggregate, of shares of common stock issued or issuable at an effective price per share less than the exercise price then in effect pursuant to (A) our Sales Agreement with Cantor Fitzgerald & Co. or (B) any similar agreement that may be entered into while this base warrant is outstanding, (ii) securities issued pursuant to board-approved equity incentive plans; *provided, however*, issuances to consultants shall not exceed 25,000 shares (to be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction), in the aggregate, of common stock or common stock equivalents in any twelve month period, (iii) securities issued in certain strategic transactions, and (iv) securities issued upon the exercise of warrants outstanding prior to the issuance of the base warrants and pre-funded warrants.

*Fundamental Transactions.* In the event of any fundamental transaction, as described in the warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of a warrant, the holder will have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the warrant is exercisable immediately prior to such event. In addition, in the event of a fundamental transaction, we or any successor entity will be required to purchase, at a holder's option, exercisable at any time concurrently with or within thirty (30) days after the consummation of the fundamental transaction, such holder's warrants for cash in an amount equal to the value of the unexercised portion of such holder's warrants, determined in accordance with the Black Scholes option pricing model as specified in the warrants.

*Rights as Stockholders.* The warrant holders do not have the rights or privileges of holders of our common stock and any voting rights until they exercise their warrants and receive shares of our common stock. After the issuance of shares of our common stock upon exercise of the warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

## **Anti-Takeover Provisions**

### ***Section 203 of the Delaware General Corporation Law***

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (1) persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an “interested stockholder” as an entity or person who, together with the person’s affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

## **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar’s address is 350 Indiana Street, Suite 750, Golden, Colorado 80401. Its phone number is (303) 262-0600.

## **Listing on the NYSE MKT**

Our common stock is listed on the NYSE MKT under the symbol “IMUC.” We do not intend to list the Units, the Preferred Stock, the Series 1 Warrants, the Series 2 Warrants or the Series 3 Warrants on the NYSE MKT, any other national securities exchange or any other nationally recognized trading system. Without an active trading market, the liquidity of the Units, the Preferred Stock, the Series 1 Warrants, the Series 2 Warrants and the Series 3 Warrants will be limited.

## DESCRIPTION OF THE SECURITIES WE ARE OFFERING

We are offering an aggregate of up to 5,000 Units, each consisting of (i) one share of our Preferred Stock, (ii) 0.6 of a Series 1 Warrant to purchase one share of Preferred Stock, (iii) 0.6 of a Series 2 Warrant to purchase one share of Preferred Stock and (iv) 0.6 of a Series 3 Warrant to purchase one share of Preferred Stock. The Units will not be issued or certificated. The Preferred Stock and Warrants are immediately separable and will be issued separately, but will be purchased together as a unit in this offering.

### Common Stock

The material terms and provisions of our common stock and each other class of our securities which qualifies or limits our common stock are described under the caption "Description of Capital Stock" in this prospectus.

### Preferred Stock

Our authorized preferred stock consists of 1,000,000 shares. As of March 31, 2017, there were no shares of preferred stock outstanding. The following is a summary of the material terms of the Preferred Stock. This summary is not complete and is qualified in its entirety by reference to the Certificate of Designations and our Certificate of Incorporation. You should review a copy of the Certificate of Designation filed as an exhibit to the registration statement of which this prospectus forms a part for a complete description of the terms and conditions applicable to the Preferred Stock offered by this prospectus.

*Amount of Preferred Stock Shares* . Our board of directors will designate 15,000 shares of preferred stock as Series B Preferred Stock. Each purchaser of Units will receive one share of Preferred Stock for each Unit purchased. Each share of Preferred Stock has a par value of \$0.0001 and a stated value of \$1,080, subject to increase as set forth below.

*Liquidation* . Upon our liquidation, dissolution or winding-up, the assets of the company available for distribution to our stockholders shall be distributed pari passu among the holders of the shares of our Preferred Stock and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock.

*Dividends* . Holders of Preferred Stock are entitled to receive cumulative dividends at the rate of 8.0% per annum, payable quarterly on January 1, April 1, July 1 and October 1, beginning on the first such date after the original issue date and on each conversion date to the converting holder. The form of dividend payments to each holder shall be determined in the following order of priority: (i) if funds are legally available for the payment of dividends and certain equity conditions (as described in the Certificate of Designation, the "Equity Conditions") have not been met, in cash only, (ii) if funds are legally available for the payment of dividends and the Equity Conditions have been met, at our sole election, in cash or shares of Common Stock, (iii) if funds are not legally available for the payment of dividends and the Equity Conditions have been met, in shares of Common Stock, (iv) if funds are not legally available for the payment of dividends and the Equity Condition relating to an effective registration statement has been waived by such holder, as to such holder only, in unregistered shares of Common Stock, and (v) if funds are not legally available for the payment of dividends and the Equity Conditions have not been met, then, at the election of such holder, such dividends accrete to and increase the outstanding stated value of the Preferred Stock and will be considered fully paid and no longer accrued and unpaid dividends. Any dividends that are not paid within three trading days following the applicable payment date other than dividends that accrete to and increase the stated value shall continue to accrue and shall incur a late fee at the rate of 18.0% per annum or the lesser maximum rate permitted by applicable law, which shall accrue daily from the applicable payment date through and including the date of actual payment in full. There are no sinking fund provisions applicable to the Preferred Stock.

*Voluntary Conversion* . Subject to the fulfillment of the Equity Conditions, each share of Preferred Stock is convertible, at any time from time to time at the holder's option, into a number of shares of Common Stock determined by dividing \$1,080 by the

conversion price described below (subject to adjustment described below). The right to convert is limited by the beneficial ownership limitation described below.

*Mandatory Conversion* . Each share of Preferred Stock will automatically convert 12 months following the applicable date of issuance into a number of shares of Common Stock determined by dividing \$1,080 by the conversion price described below (subject to adjustment described below).

*Beneficial Ownership Limitation* . A holder shall have no right to convert any portion of Preferred Stock, to the extent that, after giving effect to such conversion, such holder, together with such holder's affiliates, and any persons acting as a group together with such holder or any such affiliate, would beneficially own in excess of 4.99% (or, at the election of a holder prior to issuance of any shares of Preferred Stock, 9.99%) of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon such conversion (subject to the right of the holder to increase or decrease such beneficial ownership limitation).

*Conversion Price* . The conversion price for the Preferred Stock shall be equal to the lesser of (a) the Set Price of \$ , subject to certain adjustments, and (b) 87.5% of the lowest volume weighted average price for our Common Stock as reported at the close of trading on the market reporting trade prices for the Common Stock during the ten trading days ending on, and including, the date of the notice of conversion. In no event shall the conversion price described in (b) be less than \$0.35 (as adjusted for splits, stock dividends, distributions of Common Stock or securities convertible, exercisable or exchangeable for Common Stock, subdivisions, combinations and reclassifications) except in the event of anti-dilution adjustments. The Set Price is subject to adjustment for stock splits, stock dividends, distributions of Common Stock or securities convertible, exercisable or exchangeable for Common Stock, subdivisions, combinations and reclassifications. Further, the Set Price is subject to full ratchet adjustment if we issue or are deemed to issue additional shares of our Common Stock at a price per share less than the then effective Set Price. For purposes of these adjustments, dilutive issuances do not include (i) up to \$15,000,000, in the aggregate, of shares of Common Stock issued or issuable at an effective price per share less than the exercise price then in effect pursuant to (A) our Sales Agreement with Cantor Fitzgerald & Co. or (B) any similar agreement that may be entered into while the Warrants are outstanding, (ii) securities issued pursuant to board-approved equity incentive plans; *provided, however* , issuances to consultants shall not exceed 1,000,000 shares (to be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction), in the aggregate, of Common Stock or Common Stock equivalents in any twelve month period, (iii) securities issued in certain strategic transactions, and (iv) securities issued upon the exercise of warrants outstanding prior to or in connection with the issuance of the Preferred Stock.

Except as set forth in the exclusions described above, if the Company in any manner grants or sells any rights, warrants or options and the lowest price per share for which one share of Common Stock is at any time issuable upon the exercise of any such option or upon conversion, exercise or exchange of any convertible securities issuable upon exercise of any such option or otherwise pursuant to the terms thereof is less than the Conversion Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the granting or sale of such option for such price per share. For purposes of this paragraph only, the "lowest price per share for which one share of Common Stock is issuable upon the exercise of any such options or upon conversion, exercise or exchange of any convertible securities issuable upon exercise of any such option or otherwise pursuant to the terms thereof" shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to any one share of Common Stock upon the granting or sale of such option, upon exercise of such option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such option or otherwise pursuant to the terms thereof and (y) the lowest exercise price set forth in such option for which one share of Common Stock is issuable upon the exercise of any such options or upon conversion, exercise or exchange of any convertible securities issuable upon exercise of any such option or otherwise pursuant to the terms thereof. Except as contemplated below, no further adjustment of the Conversion Price shall be made upon the actual issuance of such shares of Common Stock or of such convertible securities upon the exercise of such options or otherwise pursuant to the terms of or upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such convertible securities.

If the Company in any manner issues or sells any convertible securities and the lowest price per share for which one share of Common Stock is at any time issuable upon the conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof is less than the Conversion Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the issuance or sale of such convertible securities for such price per share. For purposes of this paragraph only, the “lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof” shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to one share of Common Stock upon the issuance or sale of the convertible security and upon conversion, exercise or exchange of such convertible security or otherwise pursuant to the terms thereof and (y) the lowest conversion price set forth in such convertible security for which one share of Common Stock is issuable upon conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof minus (2) the sum of all amounts paid or payable to the holder of such convertible security (or any other person) upon the issuance or sale of such convertible security plus the value of any other consideration received or receivable by, or benefit conferred on, the holder of such convertible security (or any other person). Except as contemplated below, no further adjustment of the Conversion Price shall be made upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such convertible securities or otherwise pursuant to the terms thereof, and if any such issuance or sale of such convertible securities is made upon exercise of any options for which adjustment of the Conversion Price has been or is to be made, except as contemplated below, no further adjustment of the Conversion Price shall be made by reason of such issuance or sale.

If the purchase or exercise price provided for in any options, the additional consideration, if any, payable upon the issue, conversion, exercise or exchange of any convertible securities, or the rate at which any convertible securities are convertible into or exercisable or exchangeable for shares of Common Stock increases or decreases at any time (other than proportional changes in conversion or exercise prices, as applicable, in connection with stock dividends, splits or combination of outstanding Common Stock) the Conversion Price in effect at the time of such increase or decrease shall be adjusted to the Conversion Price which would have been in effect at such time had such options or convertible securities provided for such increased or decreased purchase price, additional consideration or increased or decreased conversion rate, as the case may be, at the time initially granted, issued or sold. If the terms of any option or convertible security that was outstanding as of the date of issuance of the Units are increased or decreased in the manner described in the immediately preceding sentence, then such option or convertible security and the shares of Common Stock deemed issuable upon exercise, conversion or exchange thereof shall be deemed to have been issued as of the date of such increase or decrease. No adjustment shall be made if such adjustment would result in an increase of the Conversion Price then in effect.

If any option and/or convertible security and/or Adjustment Right is issued in connection with the issuance or sale or deemed issuance or sale of any other securities of the Company (as determined by the holder of Preferred Stock, the “Primary Security”, and such option and/or convertible security and/or Adjustment Right (as defined below), the “Secondary Securities” and together with the Primary Security, each a “unit”), together comprising one integrated transaction, the aggregate consideration per share of Common Stock with respect to such Primary Security shall be deemed to be the lower of (x) the purchase price of such unit, (y) if such Primary Security is an option and/or convertible security, the lowest price per share for which one share of Common Stock is at any time issuable upon the exercise or conversion of the Primary Security in accordance with the paragraphs above and (z) the lowest volume-weighted average price of the Common Stock on any trading day during the four trading day period immediately following the public announcement of such dilutive issuance. If any shares of Common Stock, options or convertible securities are issued or sold or deemed to have been issued or sold for cash, the consideration received therefor will be deemed to be the net amount of consideration received by the Company therefor. If any shares of Common Stock, options or convertible securities are issued or sold for a consideration other than cash, the amount of such consideration received by the Company will be the fair value of such consideration, except where such consideration consists of publicly traded securities, in which case the amount of consideration received by the Company for such securities will be the arithmetic average of the volume-weighted average prices of such security for each of the five (5) trading days immediately preceding the date of receipt. If any shares of Common Stock, options or convertible securities are issued to the owners of the non-surviving entity in connection with any merger in which the Company is the surviving entity, the amount of



consideration therefor will be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such shares of Common Stock, options or convertible securities (as the case may be). The fair value of any consideration other than cash or publicly traded securities will be determined jointly by the Company and the holder. If such parties are unable to reach agreement within ten (10) days after the occurrence of an event requiring valuation (the "Valuation Event"), the fair value of such consideration will be determined within five (5) trading days after the tenth (10th) day following such Valuation Event by an independent, reputable appraiser jointly selected by the Company and the holder.

"Adjustment Right" means any right granted with respect to any securities issued in connection with, or with respect to, any issuance or sale (or deemed issuance or sale in accordance with the paragraph above) of shares of Common Stock that could result in a decrease in the net consideration received by the Company in connection with, or with respect to, such securities (including, without limitation, any cash settlement rights, cash adjustment or other similar rights).

*Rights Upon Distribution* . Holders of Preferred Stock are entitled to receive any dividend or other distribution of our assets (or rights to acquire our assets) declared or made to holders of our Common Stock on an "as if exercised for Common Stock" basis.

*Fundamental Transactions* . In the event of any fundamental transaction, as described in the Certificate of Designations and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent conversion of the Preferred Stock, the holder will have the right to receive as alternative consideration, for each share of our Common Stock that would have been issuable upon such conversion immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our Common Stock for which the Preferred Stock is convertible immediately prior to such event.

*Voting Rights* . Except as otherwise provided in the Certificate of Designation or required by law, the Preferred Stock has no voting rights. However, as long as any shares of Preferred Stock are outstanding, we may not, without the affirmative vote of the holders of a majority of the then outstanding shares of the Preferred Stock, alter or change adversely the powers, preferences or rights given to the Preferred Stock, amend its certificate of designation, amend our certificate of incorporation or other charter documents in any manner that adversely affects any rights of the holders or enter into any agreement with respect to any of the foregoing.

*Fractional Shares* . No fractional shares of Common Stock will be issued upon conversion of Preferred Stock. Any fraction of share shall be rounded down to the next whole share.

*Market and Exchange Listing* . The Preferred Stock are a new issue of securities and currently there is no market for the securities and we do not expect a market to develop. We do not intend to list or qualify for quotation the Preferred Stock on the NYSE MKT or any securities exchange or market.

*Form* . The Preferred Stock will be issued in book-entry form pursuant to a transfer agency agreement between us and Computershare Trust Company, N.A., as transfer agent, and shall initially be represented by one or more global certificates deposited with The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

## **Warrants**

The following is a brief summary of certain terms and conditions of the Series 1 Warrants, Series 2 Warrants and Series 3 Warrants offered by this prospectus and is subject in all respects to the provisions contained in the Series 1 Warrant and the Series 2 Warrant, the forms of which are filed as an exhibit to the registration statement of which this prospectus forms a part.

*Amount of Warrant Shares* . 0.6 of a Series 1 Warrant to purchase one share of Preferred Stock, 0.6 of a Series 2 Warrant to purchase one share of Preferred Stock and 0.6 of a Series 3 Warrant to purchase one share of Preferred Stock will be issued for every one Unit sold in this offering. The terms of the Series 1 Warrant, the Series 2 Warrant and the Series 3 Warrants are identical, except for the term.

*Exercisability, Exercise Price and Term* . Each Warrant offered hereby will have an exercise price of \$1,000 per share of Preferred Stock, subject to the adjustments described below. The Series 1 Warrants will be immediately exercisable and will expire on the three-month anniversary of the original issuance date. The Series 2 Warrants will be immediately exercisable and will expire on the six-month anniversary of the original issuance date. The Series 3 Warrants will be immediately exercisable and will expire on the twelve-month anniversary of the original issuance date.

*Cashless Exercise* . If, at the time a holder exercises its Warrant, there is no effective registration statement registering, or the prospectus contained therein is not available for an issuance of the shares of Common Stock underlying the Preferred Stock underlying the warrant to the holder, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the Warrant.

*Fractional Shares*. No fractional shares of Common Stock will be issued in connection with the exercise of a warrant. In lieu of fractional shares, we will round down to the next whole share.

*Fundamental Transactions* . In the event of any fundamental transaction, as described in the Warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our Common Stock, then upon any subsequent exercise of a Warrant, the holder will have the right to receive as alternative consideration, for each share of our Common Stock that would have been issuable upon conversion of the Preferred Stock issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of Common Stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our Common Stock that would have been issuable upon conversion of the Preferred Stock for which the Warrant is exercisable immediately prior to such event.

*Rights as Stockholders*. The holders of Warrants do not have the rights or privileges of holders of our Common Stock and any voting rights until they exercise their Warrants and receive shares of our Common Stock. After the issuance of shares of our Common Stock upon conversion of Preferred Stock issued upon exercise of the Warrants, each holder will be entitled to one vote for each share of Common Stock held of record on all matters to be voted on by stockholders.

*Transferability* . Subject to applicable laws and the restriction on transfer set forth in the Warrants, the Warrants may be transferred at the option of the holder upon surrender of the Warrant to us together with the appropriate instruments of transfer.

*Waivers and Amendments* . Subject to certain exceptions, any term of the Series 1 Warrants, the Series 2 Warrants or the Series 3 Warrants may be amended or waived with our written consent and the written consent of the holders of the then-outstanding warrants in such series.

*Market and Exchange Listing* . The Warrants are a new issue of securities and currently there is no market for the securities. We do not intend to list or qualify for quotation the Warrants on any securities exchange or market.

## MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following is a general discussion of the material U.S. federal income considerations relating to the purchase, ownership and disposition of our Common Stock, Preferred Stock or Warrants. This discussion is based on current provisions of the Internal Revenue Code of 1986 (the “Code”), existing and proposed U.S. Treasury Regulations promulgated or proposed thereunder and current administrative and judicial interpretations thereof, all as in effect as of the date of this prospectus and all of which are subject to change or to differing interpretation, possibly with retroactive effect. We have not sought and will not seek any rulings from the Internal Revenue Service (the “IRS”) regarding the matters discussed below. There can be no assurance that the IRS or a court will not take a contrary position.

This discussion is limited to U.S. holders and non-U.S. holders who hold our Common Stock, Preferred Stock or Warrants as capital assets within the meaning of Section 1221 of the Code (generally, as property held for investment). This discussion does not address all aspects of U.S. federal income taxation, such as the U.S. alternative minimum income tax and the Medicare contribution tax on net investment income, nor does it address any aspect of state, local or non-U.S. taxes, or U.S. federal taxes other than income taxes, such as federal estate taxes. This discussion does not consider any specific facts or circumstances that may apply to a holder and does not address the special tax considerations that may be applicable to particular holders, such as:

- insurance companies;
- tax-exempt organizations;
- financial institutions;
- brokers or dealers in securities;
- traders in securities that elect to use a mark-to-market method of accounting;
- regulated investment companies;
- real estate investment trusts;
- pension plans or other retirement accounts;
- controlled foreign corporations;
- passive foreign investment companies;
- corporations that accumulate earnings to avoid U.S. federal income tax;
- certain U.S. expatriates or long-term residents of the United States;
- persons that have a “functional currency” other than the U.S. dollar;
- persons that acquire our Preferred Stock or Common Stock as compensation for services;
- persons deemed to sell our stock or the Warrants under the constructive sale provisions of the Code;
- owners that hold our Common Stock, Preferred Stock or Warrants as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment; and
- partnerships or other entities treated as partnerships for U.S. federal income tax purposes.

If any entity taxable as a partnership for U.S. federal income tax purposes holds our Common Stock, Preferred Stock or Warrants, the U.S. federal income tax treatment of a partner in the partnership generally will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. A partner in a partnership or other pass-through entity that holds our Common Stock, Preferred Stock or Warrants should consult his, her or its own tax advisor regarding the applicable tax consequences.

For purposes of this discussion, the term “U.S. holder” means a beneficial owner of our Common Stock, Preferred Stock or Warrants that is, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;

- a corporation created or organized in or under the laws of the United States or of any political subdivision of the United States;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust, if (1) a U.S. court is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have authority to control all substantial decisions of the trust or (2) the trust has a valid election to be treated as a U.S. person under applicable U.S. Treasury Regulations.

A “non-U.S. holder” is a beneficial owner of our Common Stock, Preferred Stock or Warrants that is not a U.S. holder or an entity taxable as a partnership for U.S. federal income tax purposes.

**Prospective investors should consult their own tax advisors regarding the U.S. federal, state, local and non-U.S. income and other tax considerations of purchasing, holding and disposing of our Common Stock, Preferred Stock or Warrants.**

## **U.S. Holders**

### ***Purchase of Units***

For U.S. federal income tax purposes, the purchase of a Unit will be treated as the purchase of four components: (i) one share of our Preferred Stock, (ii) 0.6 of a Series 1 Warrant to purchase one share of our Preferred Stock, (iii) 0.6 of a Series 2 Warrant to purchase one share of our Preferred Stock and (iv) 0.6 of a Series 3 Warrant to purchase one share of our Preferred Stock. The purchase price for each Unit will be allocated among its components in proportion to the relative fair market value of each at the time the Unit is purchased by the holder. This allocation of the purchase price for each Unit will establish a holder’s initial tax basis for U.S. federal income tax purposes in the Preferred Stock and Warrants that compose each Unit.

### ***Exercise of Warrants***

A U.S. holder generally will not recognize gain or loss on the exercise of a Warrant and related receipt of shares of our Preferred Stock (except to the extent that cash is received in lieu of the issuance of a fractional share of our Preferred Stock). A U.S. holder’s initial tax basis in the shares of our Preferred Stock received (including the fractional share deemed received) upon exercise of a Warrant will be equal to the sum of (a) such U.S. holder’s tax basis in such Warrant plus (b) the exercise price paid by such U.S. holder on the exercise of such Warrant. A U.S. holder’s holding period for the shares of our Preferred Stock underlying the Warrants will begin on the day after the date that the Warrant is exercised.

In certain limited circumstances, a U.S. holder may be permitted to undertake a cashless exercise of Warrants into shares of our Preferred Stock. The U.S. federal income tax treatment of a cashless exercise of Warrants into shares of Preferred Stock is unclear, and the tax consequences of a cashless exercise could differ from the consequences upon the exercise of a Warrant described in the preceding paragraph. U.S. holders should consult their own tax advisors regarding the U.S. federal income tax consequences of a cashless exercise of Warrants.

### ***Certain Adjustments to the Warrants or Preferred Stock***

An adjustment to the number of shares of our Common Stock that will be issued upon the conversion of a share of Preferred Stock, or an adjustment to the exercise price of a Warrant, may be treated as a constructive distribution to a U.S. holder of our Preferred Stock or the Warrants, as applicable, or share depending on the circumstances of such adjustment. In addition, the failure to provide for such an adjustment (or to adequately adjust) may also result in a deemed distribution to U.S. holders of our Preferred Stock or the Warrants. Any such constructive distribution may be taxable whether or not there is an actual distribution of cash or other property. However, adjustments to the exercise price of Warrants or conversion price of Preferred Stock made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders thereof generally should not be considered to result in a constructive distribution. Generally, such deemed distributions will be taxable in the same manner as an actual distribution as described below under “—Distributions on Common Stock or Preferred Stock,” below, except that it is unclear whether such deemed distributions would be eligible for the reduced tax rate applicable to certain dividends paid to non-corporate holders or the dividend-received deduction applicable to certain dividends paid to corporate holders. You should consult your tax advisor as to whether such deemed distributions are eligible for dividends-received deduction or the preferential rates applicable to certain dividends. Generally, a U.S. holder’s tax basis in the underlying stock will be increased to the extent any such constructive distribution is treated as a dividend.

### ***Expiration of the Warrants without Exercise***

Upon the lapse or expiration of a Warrant, a U.S. holder will recognize a loss in an amount equal to such U.S. holder's tax basis in the Warrant. Any such loss generally will be a capital loss and will be long-term capital loss if the Warrant is held for more than one year. Deductions for capital losses are subject to significant limitations.

### ***Conversion of Preferred Stock***

A U.S. holder generally will not recognize gain or loss upon the conversion of a share of Preferred Stock into Common Stock (except to the extent that cash is received in lieu of the issuance of a fractional share of our Common Stock). A U.S. holder's initial tax basis in the shares of our Common Stock received upon the conversion of a share of Preferred Stock (including fractional share deemed received) will be equal to such U.S. holder's tax basis in the share of Preferred Stock (reduced by the basis of any fractional share paid out in cash). A U.S. holder's holding period for the shares of our Common Stock received upon the conversion of a share of Preferred Stock will include the U.S. holder's holding period in such share of Preferred Stock.

### ***Treatment of Fractional Shares***

A U.S. holder who receives cash in lieu of a fractional share of our Preferred Stock upon the exercise of a Warrant or a fractional share of our Common Stock upon the conversion of the Preferred Stock will allocate the tax basis in the Preferred Stock or Common Stock received over all of the shares received including the fractional share deemed received and will recognize capital gain or loss in the amount of the difference between the cash received and the tax basis allocated to the fractional share. Such gain or loss will be long-term capital gain or loss if at the time of the exercise of the Warrant, or at the time of the conversion the Preferred Stock, has been held by the U.S. holder for more than one year. Preferential tax rates may apply to long-term capital gain of a U.S. holder that is an individual, estate or trust. Deductions for capital losses are subject to significant limitations.

### ***Distributions on Common Stock or Preferred Stock***

If we pay distributions of cash or property with respect to our Common Stock or Preferred Stock (including constructive distributions as described above under the heading "Certain Adjustments to the Warrants or Preferred Stock"), those distributions generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the U.S. holder's investment, up to such holder's tax basis in its shares of our Common Stock or Preferred Stock, as applicable. Any remaining excess will be treated as capital gain, subject to the tax treatment described below under the heading "—Gain on Sale, Exchange or Other Taxable Disposition." Dividends received by a corporate U.S. holder may be eligible for the dividends received deduction, and dividends received by non-corporate U.S. holders generally will be subject to tax at the current lower applicable capital gains rates, provided, in each case, that certain holding period and other applicable requirements are satisfied.

### ***Gain on Sale, Exchange or Other Taxable Disposition***

Upon the sale or other taxable disposition of Common Stock, Preferred Stock or Warrants, a U.S. holder generally will recognize capital gain or loss in an amount equal to the difference between (a) the amount of cash plus the fair market value of any property received and (b) such U.S. holder's tax basis in such Common Stock, Preferred Stock or Warrants sold or otherwise disposed of. Such gain or loss generally will be long-term capital gain or loss if, at the time of the sale or other disposition, the Common Stock, Preferred Stock or Warrants have been held by the U.S. holder for more than one year. Preferential tax rates may apply to long-term capital gain of a U.S. holder that is an individual, estate or trust. Deductions for capital losses are subject to significant limitations.

### ***Non-U.S. Holders***

#### ***Distributions on Common Stock or Preferred Stock***

If we pay distributions of cash or property with respect to our Common Stock or Preferred Stock (including constructive distributions as described above under the heading "Certain Adjustments to the Warrants or Preferred Stock"), those distributions generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder's investment, up to such holder's tax basis in its shares of our Common Stock or Preferred Stock, as applicable. Any remaining excess will be treated as capital gain, subject to the tax treatment described below under the heading "—Gain on Sale, Exchange or Other

Taxable Disposition.” Dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence. In the case of any constructive distribution, it is possible that this tax would be withheld from any amount owed to the non-U.S. holder, including, but not limited to, distributions of cash, Common Stock or sales proceeds subsequently paid or credited to that holder. If we are unable to determine, at the time of payment of a distribution, whether the distribution will constitute a dividend, we may nonetheless choose to withhold any U.S. federal income tax on the distribution as permitted by U.S. Treasury Regulations.

Distributions that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States (and if an income tax treaty applies and so requires, such distribution is attributable to a permanent establishment or fixed base maintained by such non-U.S. holder in the United States) are generally not subject to the 30% withholding tax if the non-U.S. holder provides a properly executed IRS Form W-8ECI (which should be renewed periodically) stating that the distributions are not subject to withholding because they are effectively connected with the non-U.S. holder’s conduct of a trade or business in the United States. If a non-U.S. holder is engaged in a trade or business in the United States and the distribution is effectively connected with the conduct of that trade or business, the distribution will generally have the consequences described above for a U.S. holder (subject to any modification provided under an applicable income tax treaty). Any U.S. effectively connected income received by a non-U.S. holder that is treated as a corporation for U.S. federal income tax purposes may also, under certain circumstances, be subject to an additional “branch profits tax” at a 30% rate (or such lower rate as may be specified by an applicable income tax treaty).

A non-U.S. holder who claims the benefit of an applicable income tax treaty between the United States and such holder’s country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E, as applicable (which should be renewed periodically), and satisfy applicable certification and other requirements. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty generally may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim with the IRS. Non-U.S. holders should consult their own tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

Distributions on our Common Stock or Preferred Stock paid to a non-U.S. holder may also be subject to the withholding described under “—The Foreign Account Tax Compliance Act” below.

#### ***Gain on Sale, Exchange or Other Taxable Disposition***

Subject to the discussion below in “—Information Reporting and Backup Withholding” and “—Foreign Account Tax Compliance Act,” a non-U.S. holder generally will not be subject to U.S. federal income tax on gain recognized on a sale, exchange or other taxable disposition of our Common Stock, Preferred Stock or Warrants unless:

- the gain is effectively connected with the non-U.S. holder’s conduct of a trade or business in the United States and, if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States; in these cases, the non-U.S. holder will be taxed on a net income basis at the regular graduated rates and in the manner applicable to a U.S. holder, and, if the non-U.S. holder is a corporation, an additional branch profits tax at a rate of 30%, or a lower rate as may be specified by an applicable income tax treaty, may also apply;
- the non-U.S. holder is an individual present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty) on the amount by which such non-U.S. holder’s capital gains allocable to U.S. sources exceed capital losses allocable to U.S. sources during the taxable year of the disposition; or
- we are or were a “U.S. real property holding corporation” during the shorter of the five-year period ending on the date of the disposition or the period that the non-U.S. holder held our Common Stock or Preferred Stock. Generally, a corporation is a “U.S. real property holding corporation” if the fair market value of its “U.S. real property interests” (within the meaning of the Code) equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. We believe that we are not currently, and we do not anticipate becoming, a “U.S. real property holding corporation” for U.S. federal income tax purposes. Even if we are treated as a U.S. real property holding corporation, gain realized by a non-U.S. holder on a disposition of our Common Stock will not be subject to U.S. federal income tax so long as (1) the non-U.S. holder owned, directly, indirectly and constructively, no more than five percent of our Common Stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our Common Stock is regularly traded on an established securities market. There can be no assurance that our Common

Stock will continue to qualify as regularly traded on an established securities market. Disposition by a non-U.S. holder of our Preferred Stock and the Warrants (that are not expected to be regularly traded on an established securities market) may also be eligible for an exemption from withholding even if we are treated as a U.S. real property holding corporation, if on the date such Preferred Stock and/or Warrants were acquired by such non-U.S. holder such holdings had a fair market value no greater than the fair market value on that date of five percent of our regularly-traded Common Stock, provided that, if a non-U.S. holder holding our not regularly-traded Preferred Stock and Warrants subsequently acquires additional such securities, then such interests would be aggregated and valued as of the date of the subsequent acquisition in order to apply this five percent limitation. Non-U.S. holders should consult their tax advisors.

### ***Dividend Equivalents***

Section 871(m) of the Code requires withholding (up to 30%, depending on whether a treaty applies) on certain financial instruments to the extent that the payments or deemed payments on the financial instruments are contingent upon or determined by reference to U.S.-source dividends. Under U.S. Treasury regulations promulgated under Section 871(m), certain payments or deemed payments to non-U.S. holders with respect to certain equity-linked instruments ("specified ELIs") that reference U.S. stocks may be treated as dividend equivalents ("dividend equivalents") that are subject to U.S. withholding tax at a rate of 30% (or lower treaty rate). Under these regulations, withholding may be required even in the absence of any actual dividend related payment or adjustment made pursuant to the terms of the instrument. The regulations as originally adopted were to be effective for all covered contracts and instruments issued on or after January 1, 2017. In December 2016, the IRS and Treasury issued guidance which granted temporary transitional relief from the requirements of the regulations in certain circumstances and announced prospective changes to the regulations. Under such guidance Section 871(m) will apply to "delta-one" transactions only for 2017. The application of Section 871(m) to non-delta-one transactions is delayed and Section 871(m) will apply only to non-delta one transactions issued on or after January 1, 2018. A "delta one" instrument is one in which the ratio of the change in the fair market value of the instrument to the change in the fair market value of the property referenced by the contract is equal to 1.00. We do not believe that the Preferred Stock or the Warrants are delta one instruments. Accordingly, non-U.S. holders of the Preferred Stock or the Warrants should not be subject to tax under Section 871(m). However, it is possible that Section 871(m) withholding tax could apply to the Preferred Stock or the Warrants under these rules in the future if either the Preferred Stock or the Warrants were amended and thereby deemed reissued after January 1, 2018 or the Section 871(m) regulations when further amended by the IRS are broader in scope than is anticipated under the current IRS and U.S. Treasury guidance. If withholding is required, we (or the applicable paying agent) would be entitled to withhold such taxes without being required to pay any additional amounts with respect to amounts so withheld. Non-U.S. Holders should consult with their tax advisors regarding the application of Section 871(m) and the regulations thereunder in respect of their acquisition and ownership of the Preferred Stock and the Warrants.

### **Information Reporting and Backup Withholding**

Distributions on, and the payment of the proceeds of a disposition of, our Common Stock, Preferred Stock or Warrants generally will be subject to information reporting if made within the United States or through certain U.S.-related financial intermediaries. Information returns are required to be filed with the IRS and copies of information returns may be made available to the tax authorities of the country in which a holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding may also apply if the holder fails to provide certification of exempt status or a correct U.S. taxpayer identification number and otherwise comply with the applicable backup withholding requirements. Generally, a holder will not be subject to backup withholding if it provides a properly completed and executed IRS Form W-9 or appropriate IRS Form W-8, as applicable. Backup withholding is not an additional tax. Amounts withheld under the backup withholding rules may be refunded or credited against the holder's U.S. federal income tax liability, if any, provided certain information is timely filed with the IRS.

### ***Foreign Account Tax Compliance Act***

Legislation commonly known as the Foreign Account Tax Compliance Act, or FATCA, and guidance issued thereunder may impose withholding taxes on certain types of payments made to "foreign financial institutions" (as specifically defined) and certain other non-U.S. entities (including financial intermediaries). Under FATCA, failure to comply with certification, information reporting and other specified requirements could result in withholding tax being imposed on payments of dividends and sales proceeds of any property of a type which can produce U.S. source dividends to foreign intermediaries and certain non-U.S. holders. FATCA imposes a 30% withholding tax on dividends or gross proceeds from the sale or other disposition of the shares of our Preferred Stock and the shares of our Common Stock issuable on conversion of such Preferred Stock paid to a



foreign financial institution or to a non-financial foreign entity, unless (i) the foreign financial institution undertakes certain diligence and reporting obligations, (ii) the non-financial foreign entity either certifies it does not have any "substantial United States owners" as specifically defined in FATCA or furnishes identifying information regarding each substantial United States owner or (iii) the foreign financial institution or the non-financial foreign entity qualifies for an exemption from the withholding tax. We intend to treat the Warrants as also subject to FATCA. If the payee is a foreign financial institution, in the absence of any applicable exemption, it must enter into an agreement with the United States Treasury requiring, among other things, that it undertake to identify accounts held by certain United States persons or United States-owned foreign entities, annually report certain information about such accounts, and withhold 30% on "withholdable payments" (as specifically defined) made to certain account holders. An intergovernmental agreement between the United States and the foreign entity's jurisdiction may modify these requirements. Under certain transition rules, any obligation to withhold under FATCA with respect to payments of dividends on the Preferred Stock and the Common Stock is currently in effect, but with respect to the gross proceeds of a sale or other disposition of the Preferred Stock, the Warrants or the Common Stock the obligation to withhold under FATCA will not begin until January 1, 2019. Prospective investors should consult their tax advisors regarding the implications of FATCA with respect to an investment in the Units.

## UNDERWRITING

We have entered into an underwriting agreement with Maxim Group LLC with respect to the Units subject to this offering. Subject to certain conditions, we have agreed to sell to the underwriter, and the underwriter has agreed to purchase, the number of Units provided below opposite its name.

Underwriter	Number of Units
Maxim Group LLC	
Total	

The underwriter is offering the Units subject to its acceptance of the Units from us and subject to prior sale. The underwriting agreement provides that the obligations of the underwriter to pay for and accept delivery of the Units offered by this prospectus are subject to the approval of certain legal matters by its counsel and to certain other conditions. The underwriter is obligated to take and pay for all of the Units if any such Units are taken.

The underwriter has advised us that it proposes to offer the Units to the public at the respective public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of \$ per Unit. After this offering, the public offering price and concession to dealers may be changed by the representative. No such change shall change the amount of proceeds to be received by us as set forth on the cover page of this prospectus. The Units are offered by the underwriter as stated herein, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part. The underwriter has informed us that it does not intend to confirm sales to any accounts over which it exercises discretionary authority.

### Discounts and Expenses

The following table summarizes the public offering price, underwriting discount and proceeds before expenses to us:

	Per Unit	Total
Public offering price	\$	\$
Underwriting discount	\$	\$
Proceeds to us (before expenses)	\$	\$

We granted the underwriters a warrant solicitation fee of two and a half percent (2.5%) of the gross cash proceeds received by the Company from time to time in connection with the exercise of any Warrant solicited by the Underwriters and in compliance with FINRA Rule 5110(f)(2)(J), payable within three (3) business days of receipt by the Company of any proceeds from the exercise of such Warrant.

In addition, we have agreed to reimburse the underwriters for reasonable out-of-pocket expenses not to exceed \$60,000 in the aggregate. We estimate that total expenses payable by us in connection with this offering, other than the underwriting discount referred to above, will be approximately \$485,000.

We have also agreed to give the underwriter a right of first refusal to act as our agent in any subsequent financing for six months following the commencement of sales in this offering.

Our Common Stock is currently traded on the NYSE MKT under the symbol "IMUC." On June 21, 2017 the closing price of our Common Stock was \$0.85 per share.

The public offering price of the securities offered by this prospectus will be determined by negotiation between us and the underwriter. Among the factors considered in determining the public offering price of the shares were:

- our history and our prospects;
- the industry in which we operate;
- our past and present operating results;

- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the securities sold in this offering. That price is subject to change as a result of market conditions and other factors and we cannot assure you that the securities sold in this offering can be resold at or above the public offering price.

### **Indemnification**

We have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act of 1933, as amended or to contribute to payments that the underwriter may be required to make for these liabilities.

### **Lock-up Agreements**

We, our officers, directors and certain of our stockholders have agreed, subject to limited exceptions, for a period of 90 days after the date of the underwriting agreement, not to offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of, directly or indirectly any shares of Common Stock or any securities convertible into or exchangeable for our Common Stock either owned as of the date of the underwriting agreement or thereafter acquired without the prior written consent of the underwriter. After 30 days following the date of this prospectus, the foregoing restrictions will not apply to shares that may be sold by us pursuant to our Sales Agreement with Cantor Fitzgerald & Co., as agent, or shares that may be sold by our officers and directors pursuant to trading plans established pursuant to Rule 10b5-1 under the Securities Exchange Act of 1934, as amended, that are in place as of the date of this prospectus. The underwriter may, in its sole discretion and at any time or from time to time before the termination of the lock-up period, without notice, release all or any portion of the securities subject to lock-up agreements.

### **Price Stabilization, Short Positions and Penalty Bids**

The underwriter has advised us that it does not intend to conduct any stabilization or over-allotment activities in connection with this Offering.

### **Electronic Distribution**

This prospectus in electronic format may be made available on websites or through other online services maintained by the underwriter, or by its affiliates. Other than this prospectus in electronic format, the information on the underwriter's website and any information contained in any other website maintained by the underwriter is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter, and should not be relied upon by investors.

### **Other**

From time to time, the underwriter and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services it has received and, may in the future receive, customary fees.

Except for the services provided in connection with this offering, the underwriter has not provided any investment banking or other financial services during the 180-day period preceding the date of this prospectus and we do not expect to retain the underwriter to perform any investment banking or other financial services for at least 90 days after the date of this prospectus.

### **Offers Outside the United States**

Other than in the United States, no action has been taken by us or the underwriter that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this

prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

## NOTICE TO INVESTORS

### Notice to Investors in the United Kingdom

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a “Relevant Member State”) an offer to the public of any securities which are the subject of the offering contemplated by this prospectus may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any such securities may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- a. to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- b. to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;
- c. by an underwriter to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive); or
- d. in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of these securities shall result in a requirement for the publication by the issuer or the underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to any of the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any such securities to be offered so as to enable an investor to decide to purchase any such securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression “Prospectus Directive” means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

The underwriter has represented, warranted and agreed that:

- a. it has only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000 (the FSMA)) received by it in connection with the issue or sale of any of the securities in circumstances in which section 21(1) of the FSMA does not apply to the issuer; and
- b. it has complied with and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

### European Economic Area

In particular, this document does not constitute an approved prospectus in accordance with European Commission’s Regulation on Prospectuses no. 809/2004 and no such prospectus is to be prepared and approved in connection with this offering. Accordingly, in relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (being the Directive of the European Parliament and of the Council 2003/71/EC and including any relevant implementing measure in each Relevant Member State) (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) an offer of securities to the public may not be made in that Relevant Member State prior to the publication of a prospectus in relation to such securities which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member

State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of securities to the public in that Relevant Member State at any time:

- to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000; and (3) an annual net turnover of more than €50,000,000, as shown in the last annual or consolidated accounts; or
- in any other circumstances which do not require the publication by the Issuer of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer of securities to the public” in relation to any of the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State. For these purposes the securities offered hereby are “securities.”

## LEGAL MATTERS

Cooley LLP, Palo Alto, California, will pass upon the validity of the Preferred Stock, the Warrants and the Common Stock issuable upon conversion of the Preferred Stock and exercise of the Warrants offered hereby. The underwriter is being represented by Ellenoff Grossman & Schole LLP of New York, New York in connection with the offering.

## EXPERTS

Marcum LLP, an independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2016, as set forth in their report dated March 9, 2017, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our consolidated financial statements are incorporated by reference in reliance on Marcum LLP's report, given on the authority of such firm as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION AND INCORPORATION BY REFERENCE

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the Units, Preferred Stock and Warrants offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits filed with the registration statement. For further information about us and the Units, Preferred Stock and the Warrants offered hereby, we refer you to the registration statement and the exhibits filed with the registration statement. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. A copy of the registration statement and the filed exhibits may be inspected without charge at the public reference room maintained by the SEC, located at 100 F Street, NE, Washington, DC 20549, and copies of all or any part of the registration statement may be obtained from that office at prescribed rates. Please call the SEC at 1-800-SEC-0330 for further information about the public reference room. The SEC also maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the website is [www.sec.gov](http://www.sec.gov).

We are subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, are required to file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information are available for inspection and copying at the SEC's public reference facilities and the website of the SEC referenced above. We make available free of charge, on or through the investor relations section of our website, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The information found on our website, other than as specifically incorporated by reference in this prospectus, is not part of this prospectus.

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose important information to you by referring you to another document that we have filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC (Commission File No. 001-35560), excluding any portions of any Current Report on Form 8-K that are not deemed "filed" pursuant to the General Instructions of Form 8-K:

- our Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 9, 2017;
- our definitive proxy statement on Schedule 14A, filed on April 28, 2017;

- our Quarterly Report on Form 10-Q for the period ended March 31, 2017 filed with the SEC on May 15, 2017; and
- our Current Reports on Form 8-K filed with the SEC on April 20, 2017, May 5, 2017, June 21, 2017, June 22, 2017 and June 29, 2017.





**5,000 Units**  
**Each Consisting of**  
**One Share of Series B 8.0% Mandatorily Convertible Preferred Stock**  
**Series 1 Warrants to Purchase One Share of Preferred Stock**  
**Series 2 Warrants to Purchase One Share of Preferred Stock**  
**Series 3 Warrants to Purchase One Share of Preferred Stock**

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**Prospectus**

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**Maxim Group LLC**

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**, 2017**

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## PART II - INFORMATION NOT REQUIRED IN PROSPECTUS

### ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

We estimate that expenses in connection with the distribution described in this registration statement (other than brokerage commissions, discounts or other expenses relating to the sale of the shares by the selling stockholders) will be as set forth below. We will pay all of the expenses with respect to the distribution, and such amounts, with the exception of the Securities and Exchange Commission registration fee and FINRA fee, are estimates.

SEC registration fee	\$	1,740
FINRA filing fee	\$	2,750
Accounting fees and expenses	\$	60,000
Legal fees and expenses	\$	360,000
Printing and related expenses	\$	5,000
Miscellaneous	\$	55,510
Total	\$	485,000

### ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Our amended and restated certificate of incorporation provides that no officer or director shall be personally liable to this corporation or our stockholders for monetary damages except as provided pursuant to Delaware law. Our amended and restated certificate of incorporation and our amended and restated bylaws also provide that we shall indemnify and hold harmless each person who serves at any time as a director, officer, employee or agent of our from and against any and all claims, judgments and liabilities to which such person shall become subject by reason of the fact that he is or was a director, officer, employee or agent of our and shall reimburse such person for all legal and other expenses reasonably incurred by him or her in connection with any such claim or liability. We also have the power to defend such person from all suits or claims in accord with the Delaware law. The rights accruing to any person under our amended and restated certificate of incorporation and our amended and restated bylaws do not exclude any other right to which any such person may lawfully be entitled, and we may indemnify or reimburse such person in any proper case, even though not specifically provided for by our amended and restated certificate of incorporation and our amended and restated bylaws.

We have entered into an indemnity agreement with each of our directors. In our employment agreements with Anthony Gringeri and Andrew Gengos, we agreed to indemnify him for all claims arising out of performance of his duties, other than those arising out of his breach of the agreement or his gross negligence or willful misconduct.

Insofar as indemnification for liabilities for damages arising under the Securities Act of 1933 may be permitted to our directors, officers, and controlling persons pursuant to the foregoing provision, or otherwise, we have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

The underwriting agreement filed as Exhibit 1.1 to this Registration Statement provides for indemnification by the underwriter of us and our directors and officers for certain liabilities under the Securities Act, or otherwise.

**ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES**

None.

**ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

(a) *Exhibits.*

The exhibits to the registration statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

(b) *Financial Statement Schedules.*

Financial statement schedules have been omitted, as the information required to be set forth therein is included in the Consolidated Financial Statements or Notes thereto appearing in the prospectus made part of this registration statement.

**ITEM 17. UNDERTAKINGS**

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 to:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act.

(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 Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 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 (1)(i), (ii) and (iii) 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 the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to securities offered therein, and the offering of the 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 under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

Insofar as indemnification for liabilities arising under the Securities Act 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 Securities 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 Securities Act and will be governed by the final adjudication of such issue.

## 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, in Calabasas, California, on July 7, 2017.

IMMUNOCELLULAR THERAPEUTICS, LTD.

By: /s/ Anthony Gringeri, Ph.D.

Anthony Gringeri, Ph.D.  
President and Chief Executive Officer

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

Signature	Title	Date
<u>/s/ Anthony Gringeri, Ph.D.</u> Anthony Gringeri, Ph.D.	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	July 7, 2017
<u>/s/ David Fractor</u> David Fractor	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	July 7, 2017
<u>*</u> Gregg A. Lapointe	Director	July 7, 2017
<u>*</u> Rahul Singhvi, Sc.D.	Director	July 7, 2017
<u>*</u> Mark A. Schlossberg	Director	July 7, 2017
<u>*</u> Gary S. Titus	Director	July 7, 2017
<u>*</u> John S. Yu, M.D.	Director	July 7, 2017

\* Pursuant to Power of Attorney

By: /s/ Anthony Gringeri, Ph.D.

Anthony Gringeri, Ph.D.  
Attorney-in-Fact

**EXHIBIT INDEX**

Exhibit	Description	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
1.1	Form of Underwriting Agreement					X
2.1	Agreement and Plan of Reorganization dated as of May 5, 2005, as amended, among Patco Industries Subsidiary, Inc., William C. Patridge, and Spectral Molecular Imaging, Inc., as amended on June 30, 2005, September 26, 2005 and January 20, 2006	8-K	033-17624-NY	2.1	1/26/2006	
3.1	Amended and Restated Certificate of Incorporation	8-K	001-35560	3.1	11/3/2006	
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation	8-K	001-35560	3.2	11/3/2006	
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation	8-K	001-35560	3.1	05/09/2007	
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation	10-Q	001-35560	3.1	11/14/2011	
3.5	Certificate of Amendment to Amended and Restated Certificate of Incorporation	8-K	001-35560	3.1	09/24/2013	
3.6	Certificate of Amendment to Amended and Restated Certificate of Incorporation	8-K	001-35560	3.1	11/19/2015	
3.7	Certificate of Amendment to Amended and Restated Certificate of Incorporation	8-K	001-35560	3.1	11/18/2016	
3.8	Certificate of Amendment to Amended and Restated Certificate of Incorporation	8-K	0001-35560	3.1	06/22/2017	
3.9	Amended and Restated Bylaws	S-8	333-171652	3.1	1/11/2011	
3.10	Amendment to the Amended and Restated Bylaws	8-K	001-35560	3.1	5/25/2012	
3.11	Certificate of Designation of Preferences, Rights and Limitations of Series B 8.0% Mandatorily Convertible Preferred Stock					X
4.1	Form of Common Stock Certificate of the Registrant	SB-2	333-140598	4.1	2/12/2007	
4.2	Form of Warrant to Purchase Common Stock, originally issued in February 2011	8-K	033-17264-NY	4.1	2/25/2011	
4.3	Form of Warrant to Purchase Common Stock, originally issued in January 2012	8-K	033-17264-NY	4.1	1/10/2012	
4.4	Form of Warrant to Purchase Common Stock, originally issued in October 2012	8-K	001-35560	10.1	10/19/2012	
4.5	Form of Warrant to Purchase Common Stock, originally issued in February 2015	10-Q	001-35560	4.1	5/11/2015	
4.6	Form of Base Warrant to Purchase Common Stock, originally issued in August 2016	S-1/A	333-211763	4.8	8/4/2016	
4.7	Form of Pre-Funded Warrant to Purchase Common Stock, originally issued in August 2016	S-1/A	333-211763	4.9	8/4/2016	
4.8	Form of Warrant to Purchase Series B Preferred Stock					X
5.1	Opinion of Cooley LLP					X
10.1	Amended and Restated 2006 Equity Incentive Plan of ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.1	11/14/2011	
10.2	Form of Non-Qualified Stock Option Agreement for the 2006 Equity Incentive Plan of ImmunoCellular Therapeutics, Ltd.	S-8	333-147278	4.5	11/9/2007	

10.3	Form of Incentive Stock Option Agreement for the 2006 Equity Incentive Plan of ImmunoCellular Therapeutics, Ltd.	S-8	333-147278	4.6	11/9/2007	
10.4†	Exclusive License Agreement dated as of November 17, 2006 between Cedars-Sinai Medical Center and ImmunoCellular Therapeutics, Ltd.	8-K	033-17264-NY	10.1	11/22/2006	
10.5†	First Amendment to Exclusive License Agreement dated as of June 16, 2008, between Cedars-Sinai Medical Center and ImmunoCellular Therapeutics, Ltd.	10-Q	033-17264-NY	10.2	08/14/2008	
10.6	Stock Purchase Agreement dated as of November 17, 2006 between Cedars-Sinai Medical Center and ImmunoCellular Therapeutics, Ltd.	8-K	033-17264-NY	10.3	11/22/2006	
10.7	Registration Rights Agreement dated as of November 17, 2006 between Cedars-Sinai Medical Center and ImmunoCellular Therapeutics, Ltd.	8-K	033-17264-NY	10.4	11/22/2006	
10.8	Securities Purchase Agreement dated as of November 17, 2006 between Dr. John Yu and ImmunoCellular Therapeutics, Ltd.	8-K	033-17264-NY	10.5	11/22/2006	
10.9	Agreement dated as of November 17, 2006 between Dr. John Yu and ImmunoCellular Therapeutics, Ltd.	8-K	033-17264-NY	10.2	11/22/2006	
10.10	Nonqualified Stock Option Agreement dated as of November 17, 2006 between Dr. John Yu and ImmunoCellular Therapeutics, Ltd.	8-K	033-17264-NY	10.6	11/22/2006	
10.11	Registration Rights Agreement dated as of November 17, 2006 between Dr. John Yu and ImmunoCellular Therapeutics, Ltd.	8-K	033-17264-NY	10.7	11/22/2006	
10.12	Agreement dated as of February 14, 2008 between Molecular Discoveries, LLC and ImmunoCellular Therapeutics, Ltd.	10KSB	033-17264-NY	10.20	03/25/2008	
10.13	Registration Rights Agreement dated as of April 14, 2008, between Molecular Discoveries, LLC and ImmunoCellular Therapeutics, Ltd.	S-1	333-150277	10.24	04/16/2008	
10.14	Agreement dated as of August 1, 2008 between Dr. Cohava Gelber and ImmunoCellular Therapeutics, Ltd.	10-K	001-35560	10.1	03/30/2009	
10.15	Second Amendment dated August 1, 2009 to Exclusive License Agreement dated as of November 17, 2006 between Cedars-Sinai Medical Center and ImmunoCellular Therapeutics, Ltd.	10-Q	033-17264-NY	10.1	11/13/2009	
10.16	Preferred Stock Purchase Agreement dated as of December 3, 2009 between ImmunoCellular Therapeutics, Ltd. and Socius Capital Group, LLC d/b/a Socius Life Sciences Capital Group, LLC	8-K	033-17264-NY	10.1	12/03/2009	
10.17	Agreement dated March 1, 2010 between Dr. John Yu and ImmunoCellular Therapeutics, Ltd.	10-K	033-17264-NY	10.36	03/31/2010	
10.18	Securities Purchase Agreement dated March 11, 2010 between participants in the March 2010 private placement and ImmunoCellular Therapeutics, Ltd.	10-Q	033-17264-NY	10.6	05/18/2010	
10.19	Form of Registration Rights Agreement dated as of March 29, 2010 between participants in the March 2010 private placement and ImmunoCellular Therapeutics, Ltd.	S-1/A	333-150277	10.27	05/12/2010	
10.20	Modification Agreement dated May 2, 2010 among Socius CG II, Ltd., Socius Life Sciences Capital Group, LLC and ImmunoCellular Therapeutics, Ltd.	S-1/A	333-150277	10.33	05/12/2010	



10.21	Third Amendment dated March 26, 2010 to Exclusive License Agreement dated as of November 17, 2006 between Cedars-Sinai Medical Center and ImmunoCellular Therapeutics, Ltd.	S-1/A	333-150277	10.35	05/12/2010	
10.22	Securities Purchase Agreement dated May 12, 2010 between participants in the May 2010 private placement and ImmunoCellular Therapeutics, Ltd.	10-Q	033-17264-NY	10.11	05/18/2010	
10.23	Form of Registration Rights Agreement between participants in the May 2010 private placement and ImmunoCellular Therapeutics, Ltd.	10-Q	033-17264-NY	10.12	05/18/2010	
10.24	Purchase Agreement, dated as of February 22, 2011, by and between the ImmunoCellular Therapeutics, Ltd. and each investor named therein	10-Q	001-35560	10.1	5/11/2015	
10.25	Registration Rights Agreement, dated as of February 22, 2011, by and among ImmunoCellular Therapeutics, Ltd. and the investors named therein	8-K	033-17264-NY	10.2	02/25/2011	
10.26†	Exclusive Sublicense Agreement dated May 28, 2010 between Targepeutics, Inc. and ImmunoCellular Therapeutics, Ltd.	10-K	033-17264-NY	10.48	03/31/2011	
10.27†	Sponsored Research and Vaccine Production Agreement dated January 1, 2011 between The Trustees of the University of Pennsylvania and ImmunoCellular Therapeutics, Ltd.	10-K	033-17264-NY	10.49	03/31/2011	
10.28	Placement agent agreement dated March 30, 2010 between Gilford Securities Incorporated and ImmunoCellular Therapeutics, Ltd.	10-K	033-17264-NY	10.50	03/31/2011	
10.29	Placement agent agreement dated April 7, 2010 between Scarsdale Equities LLC and ImmunoCellular Therapeutics, Ltd.	10-K	033-17264-NY	10.51	03/31/2011	
10.30	Consulting Agreement dated October 1, 2010 between JFS Investments and ImmunoCellular Therapeutics, Ltd.	10-K	033-17264-NY	10.52	03/31/2011	
10.31	Advisory services agreement dated October 1, 2010 between Garden State Securities Inc. and ImmunoCellular Therapeutics, Ltd.	10-K	033-17264-NY	10.53	03/31/2011	
10.32	Co-placement Agents Agreement dated January 31, 2011 among Summer Street Research Partners, Dawson James Securities, Inc. and ImmunoCellular Therapeutics, Ltd.	10-K	033-17264-NY	10.54	03/31/2011	
10.33	Agreement dated as of March 13, 2011 between Dr. John Yu and ImmunoCellular Therapeutics, Ltd.	10-Q	033-17264-NY	10.4	08/18/2011	
10.34†	Patent License Agreement, effective February 10, 2012, among The Trustees of the University of Pennsylvania and ImmunoCellular Therapeutics, Ltd.	10-Q	033-17264-NY	10.50	03/21/2012	
10.35†	Exclusive License Agreement, effective February 16, 2012, between the Johns Hopkins University and ImmunoCellular Therapeutics, Ltd.	10-Q	033-17264-NY	10.51	03/21/2012	
10.36	Office Lease dated July 1, 2012 between Regent Business Centers and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.1	08/14/2012	
10.37	Employment Agreement dated December 3, 2012 between Andrew Gengos and ImmunoCellular Therapeutics, Ltd.	10-K	001-35560	10.54	03/11/2013	
10.38	Form of Stock Option Grant Notice for the 2006 Equity Incentive Plan of ImmunoCellular Therapeutics, Ltd.	10-K	001-35560	10.55	03/11/2013	

10.39	Controlled Equity Offering <sup>SM</sup> Sales Agreement dated April 18, 2013 between ImmunoCellular Therapeutics, Ltd. and Cantor Fitzgerald & Co.	8-K	001-35560	10.1	04/18/2013	
10.40	Form of Indemnity Agreement between ImmunoCellular Therapeutics, Ltd. and each of its directors and executive officers	10-Q	001-35560	10.1	05/10/2013	
10.41	Office Lease dated May 13, 2013 between Calabasas/Sorrento Square, LLC and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.1	08/08/2013	
10.42	Master Services Agreement dated September 1, 2010 between Averion International Corp. and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.2	08/08/2013	
10.43	Employment Agreement dated August 19, 2013 between Anthony Gringeri and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.1	11/07/2013	
10.44†	Amendment No. 1 to the Exclusive License Agreement between the Johns Hopkins University and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.2	11/07/2013	
10.45	Amended and Restated 2006 Equity Incentive Plan of ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.3	11/07/2013	
10.46	Amendment No. 1 to Amended and Restated 2006 Equity Incentive Plan of ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.4	11/07/2013	
10.47	Form of Stock Option Grant Notice for the 2006 Equity Incentive Plan of ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.5	11/07/2013	
10.48	Master Services Agreement dated February 19, 2014 between Aptiv Solutions, Inc. and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10	03/14/2014	
10.49	Employment Agreement dated January 30, 2015 between Steven J. Swanson and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.1	5/11/2015	
10.50†	Agreement for GMP Manufacturing of ICT-107 dated March 13, 2015 between PharmaCell B.V. and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.2	5/11/2015	
10.51†	Amended & Restated Exclusive License Agreement dated May 13, 2015 between Cedars-Sinai Medical Center and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.2	8/7/2015	
10.52	Form of Restricted Stock Unit Agreement for the 2006 Equity Incentive Plan of ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.1	8/7/2015	
10.53†	Services Agreement dated June 11, 2015 between ImmunoCellular Therapeutics, Ltd. and PCT, LLC, a Caladrius Company	10-Q	001-35560	10.3	8/7/2015	
10.54†	Second Amendment to Exclusive License Agreement dated August 7, 2015 between ImmunoCellular Therapeutics, Ltd. and Johns Hopkins University	10-Q	001-35560	10.1	11/9/2015	
10.55	Employment Agreement dated September 17, 2015 between David Fractor and ImmunoCellular Therapeutics, Ltd., as amended on September 14, 2016	10-Q	001-35560	10.2	11/9/2015	
10.56	Independent Contractor Services Agreement effective as of October 1, 2015 between John Yu and ImmunoCellular Therapeutics, Ltd.	10-K	001-35560	10.57	3/30/2016	
10.57	Amended and Restated Independent Contractor Services Agreement dated February 1, 2016 between John Yu and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.1	5/13/2016	
10.58	2016 Equity Incentive Plan	S-1/A	333-211763	10.59	7/11/2016	

10.59	Forms of Stock Option Agreement, Notice of Grant of Stock Option, Restricted Stock Unit Grant Notice and Restricted Stock Award Grant Notice under the 2016 Equity Incentive Plan	S-1/A	333-211763	10.60	7/11/2016	
10.60	Non-Employee Director Compensation Plan	S-1/A	333-211763	10.61	7/11/2016	
10.61	First Amendment to Lease Extending Term executed on May 18, 2016 between Calabasas/Sorrento Square, LLC and ImmunoCellular Therapeutics, Ltd.	10-Q	001-35560	10.1	8/22/2016	
10.62	Separation Agreement dated December 13, 2016 between Andrew Gengos and ImmunoCellular Therapeutics, Ltd.	10-K	001-35560	10.62	3/9/2017	
23.1	Consent of Marcum LLP, independent registered public accounting firm					X
23.2	Consent of Cooley LLP (See Exhibit 5.1)					X
24.1**	Power of Attorney					

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\*\* Previously filed.

† Confidential treatment has been granted with respect to certain portions of this exhibit by the Securities and Exchange Commission. The omitted portions of the exhibit have been separately filed with the Securities and Exchange Commission.

IMMUNOCELLULAR THERAPEUTICS, LTD.

UNDERWRITING AGREEMENT

July [ ], 2017

Maxim Group LLC  
405 Lexington Avenue  
New York, New York 10174

*As Representative of the Underwriters  
named on Schedule A hereto*

Ladies and Gentlemen:

ImmunoCellular Therapeutics, Ltd., a Delaware corporation (the “Company”), proposes, subject to the terms and conditions stated herein, to issue and sell to the underwriters named in Schedule A hereto (the “Underwriters,” or each, an “Underwriter”), for whom Maxim Group LLC is acting as representative (the “Representative”), an aggregate of 5,000 units (“the “Units”) each consisting of: (i) one share of the Company’s Series B 8.0% mandatorily convertible preferred stock, \$0.0001 par value per share (the “Preferred Stock”) (each a “Share” and, collectively, the “Shares”) convertible into shares of the Company’s common stock, par value \$0.0001 per share (the “Common Stock”) (the “Conversion Shares”), (ii) 0.6 of a Series 1 Warrant (the “Series 1 Warrants”) to purchase one share of Preferred Stock, (iii) 0.6 of a Series 2 Warrant (the “Series 2 Warrants”) to purchase one share of Preferred Stock, and (iv) 0.6 of a Series 3 Warrant (the “Series 3 Warrants,” and together with the Series 1 Warrants and the Series 2 Warrants, the “Warrants” and each a “Warrant”) to purchase one share of Preferred Stock, and the shares of Preferred Stock issuable upon exercise of the Warrants (the “Warrant Shares”). Each Warrant will have an initial exercise price of \$1,000.00 per share of Preferred Stock. The Units, the Shares, the Conversion Shares, the Warrants and the Warrant Shares are collectively referred to as the “Securities.” The Units will not be issued or certificated and the Shares and the Warrants are immediately separable and will be issued separately.

The Company confirms as follows its agreement with each of the Underwriters:

1. Agreement to Sell and Purchase.

(a) *Purchase of Units.* On the basis of the representations, warranties and agreements of the Company contained herein and subject to all the terms and conditions of this Agreement, the Company agrees to sell to the Underwriters, severally and not jointly, and the Underwriters, severally and not jointly, agree to purchase from the Company, the Units, at a purchase price (prior to discount and commissions) of \$[ ] per Share, \$[ ] per Series 1 Warrant, \$[ ] per Series 2 Warrant and \$[ ] per Series 3 Warrant (or \$[ ] per Share, \$[ ] per Series 1 Warrant, \$[ ]

per Series 3 Warrant and \$[ ] per Series 3 Warrant, net of discount and commissions) for an aggregate purchase price of \$[ ] per Unit. The Units will be separately tradable and transferable immediately following the date of the Prospectus (as hereinafter defined).

2. Delivery and Payment.

(a) *Closing.* Delivery of the Units shall be made to the Representative through the facilities of the Depository Trust Company (“DTC”) for the respective accounts of the Underwriters against payment of the Purchase Price by wire transfer of immediately available funds to the order of the Company. Such payment shall be made at 10:00 a.m., New York City time, on the third business day (the fourth business day, should the offering be priced after 4:00 p.m., New York City Time) after the date of this Agreement or at such time on such other date, not later than ten business days after such date, as may be agreed upon by the Company and the Representative (such date is hereinafter referred to as the “Closing Date”).

(b) *Electronic Transfer.* Electronic transfer of the Securities shall be made at the time of purchase in such names and in such denominations as the Representative shall specify.

(c) *Tax Stamps.* The cost of original issue tax stamps, if any, in connection with the issuance and delivery of the Securities by the Company to the Underwriters shall be borne by the Company. The Company shall pay and hold each Underwriter and any subsequent holder of the Securities harmless from any and all liabilities with respect to or resulting from any failure or delay in paying United States federal and state and foreign stamp and other transfer taxes, if any, which may be payable or determined to be payable in connection with the original issuance, sale and delivery to such Underwriter of the Securities.

3. Representations and Warranties of the Company. The Company represents and warrants to, and covenants with, each of the Underwriters as follows:

(a) *Compliance with Registration Requirements.* A registration statement on Form S-1 (Registration No. 333-215331) relating to the Securities, including a preliminary prospectus and such amendments to such registration statement as may have been required prior to the date of this Agreement, has been prepared by the Company under the provisions of the Securities Act of 1933, as amended (the “Act”), and the rules and regulations (collectively referred to as the “Rules and Regulations”) of the Securities and Exchange Commission (the “Commission”) thereunder, and has been filed with the Commission. 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 at the time it becomes or became effective, 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 Rules and Regulations, as applicable. If the Company files a registration statement to register a portion of the Securities and relies on Rule 462(b) of the Rules and Regulations 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 Rules and Regulations 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 Rules and Regulations 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 Securities Exchange Act of 1934, as amended, and together with the rules and regulations promulgated thereunder (collectively, the “ Exchange Act ”) after the effective date of the Registration Statement, 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.

(b) *Effectiveness of Registration.* The Registration Statement, any Rule 462 Registration Statement and any post-effective amendment thereto have been declared effective by the Commission under the Act or have become effective pursuant to Rule 462 of the Rules and Regulations. The Company has responded to all requests, if any, of the Commission for additional or supplemental information. No stop order suspending the effectiveness of the Registration Statement or any Rule 462 Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, are threatened by the Commission.

(c) *Accuracy of Registration Statement.* Each of the Registration Statement, any Rule 462 Registration Statement and any post-effective amendment thereto, at the time it became effective, when any document filed under the Exchange Act was or is filed and at all subsequent times, complied and will comply in all material respects with the Act and the Rules and Regulations, and did not and will 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 not misleading. The Prospectus, as amended or supplemented, as of its date and at all subsequent times when a prospectus is delivered or required (or, but for the provisions of Rule 172, would be required) by applicable law to be delivered in connection with sales of Securities, complied and will comply in all material respects with the Act, the Exchange Act and the Rules and Regulations, and did not or will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein not misleading, in the light of the circumstances under which they were made. Each preliminary prospectus (including the preliminary prospectus or prospectuses filed as part of the Registration Statement or any amendment thereto) complied when so filed in all material respects with Act, the Exchange Act and the Rules and Regulations, and each preliminary prospectus and the Prospectus delivered to the Representative for use in connection with this offering is identical to the electronically transmitted copies thereof filed with the Commission on EDGAR, except to

the extent permitted by Regulation S-T. The foregoing representations and warranties in this Section 3(c) do not apply to any statements or omissions made in reliance on and in conformity with information relating to the Underwriters furnished in writing to the Company by the Underwriters through the Representative specifically for inclusion in the Registration Statement or Prospectus or any amendment or supplement thereto. . For all purposes of this Agreement, the information set forth in the Prospectus under the caption “Underwriting” in the third, twelfth, thirteenth, fourteenth and fifteenth paragraphs, constitutes the only information (the “Underwriters’ Information”) relating to the Underwriters furnished in writing to the Company by the Underwriters through the Representative specifically for inclusion in the preliminary prospectus, the Registration Statement or the Prospectus.

(d) *Company Not Ineligible Issuer* . (i) At the time of filing the Registration Statement relating to the Securities and (ii) as of the date of the execution and delivery of this Agreement (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an “ineligible issuer” (as defined in Rule 405 of the Rules and Regulations).

(e) *Disclosure at the Time of Sale*. As of the Applicable Time, neither (i) the Issuer General Use Free Writing Prospectus(es) (as defined below) issued at or prior to the Applicable Time, the most recent preliminary prospectus related to this offering, and the information included on Schedule II hereto, all considered together (collectively, the “General Disclosure Package”), nor (ii) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the General Disclosure Package, included any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the General Disclosure Package based upon and in conformity with written information furnished to the Company by the Underwriters through the Representative specifically for use therein, it being understood and agreed that the only such information furnished by the Underwriters consists of the Underwriters’ Information.

As used in this subsection and elsewhere in this Agreement:

“Applicable Time” means [ ] (New York City Time) on [ ], 2017 or such other time as agreed by the Company and the Representative.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 of the Rules and Regulations, relating to the Securities that (i) is required to be filed with the Commission by the Company, (ii) is “a written communication that is a road show” within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission or (iii) is exempt from filing pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g).

“ Issuer General Use Free Writing Prospectus ” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors, as evidenced by its being specified in Schedule I hereto.

“ Issuer Limited Use Free Writing Prospectus ” means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

(f) *Issuer Free Writing Prospectuses.* Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the Prospectus Delivery Period (as defined below), does not include any information that conflicts with the information contained in the Registration Statement. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with the Underwriters’ Information. If at any time following the issuance of an Issuer Free Writing Prospectus there occurred an event or development as a result of which such Issuer Free Writing Prospectus conflicted with the information contained in the Registration Statement relating to the Securities or included an untrue statement of material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances prevailing at that subsequent time, not misleading, the Company has promptly notified the Representative and has promptly amended or supplemented, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(g) *Distribution of Offering Material by the Company.* The Company has not distributed and will not distribute, prior to the later of the Closing Date and the completion of the Underwriters’ distribution of the Securities, any offering material in connection with the offering or sale of the Securities, the Registration Statement, the preliminary prospectus, the Permitted Free Writing Prospectuses reviewed and consented to by the Representative and included in Schedule I hereto, and the Prospectus. None of the Marketing Materials, as of their respective issue dates and at all subsequent times through the Prospectus Delivery Period (as defined below), include any information that conflicts with the information contained in the Registration Statement. If at any time following the issuance of any Marketing Material there occurred an event or development as a result of which such Marketing Material conflicted with the information contained in the Registration Statement relating to the Securities or included an untrue statement of material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances prevailing at that subsequent time, not misleading, the Company has promptly notified the Representative and has promptly amended or supplemented, at its own expense, such Marketing Material to eliminate or correct such conflict, untrue statement or omission.

(h) *Due Incorporation; Subsidiaries .*

(i) Each of the Company and its Subsidiaries is, and at the Closing Date will be, a corporation duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation (to the extent the concept of “good standing” or such equivalent concept exists under the laws of such jurisdiction). Each of the Company and its Subsidiaries has, and at the Closing Date will have, full corporate power and authority to conduct all the activities conducted by it, to own or lease all the assets owned or leased by it and to conduct its business as described in the Registration Statement and the Prospectus. Each of the Company and its Subsidiaries is, and



at the Closing Date will be, duly licensed or qualified to do business in and in good standing as a foreign corporation in all jurisdictions in which the nature of the activities conducted by it or the character of the assets owned or leased by it makes such licensing or qualification necessary, except where the failure so to qualify or to be in good standing would not reasonably be expected to have a material adverse effect on the business, properties, assets, business prospects, condition (financial or otherwise), results of operations or capitalization of the Company and its subsidiaries, taken as a whole, (a “Material Adverse Effect”). The Company has no “significant subsidiaries” (as such term is defined in Rule 1-02 of Regulation S-X). All of the issued share capital or other equity interests of each subsidiary of the Company have been duly and validly authorized and issued, are fully paid and (in the case of subsidiaries organized under the laws of any state of the United States, non-assessable), and are owned by the Company directly or indirectly through subsidiaries, free and clear of all liens, charges, encumbrances, security interests, restrictions on voting or transfer, equities or any other claims of any third parties.

(i) *Capitalization.* The issued and outstanding share capital of the Company is as set forth in the Registration Statement, the General Disclosure Package and the Prospectus. The common stock issued and outstanding and any other outstanding share capital of the Company have been, and the Securities will be, duly authorized, validly issued, fully paid and nonassessable and will not be subject to any preemptive, first refusal, or similar right. The description of the Securities included in the Registration Statement, the General Disclosure Package and the Prospectus are now, and at the Closing Date will be, complete and accurate in all material respects. Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, the Company does not have outstanding, and at the Closing Date will not have outstanding, any options to purchase, or any rights or warrants to subscribe for, or any securities or obligations convertible into, or any contracts or commitments to issue or sell, any securities of the Company or any such warrants, convertible securities or obligations. 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 shareholders. Upon the issuance and delivery pursuant to the terms of this Agreement, the Underwriters will acquire good and marketable title to the Securities, free and clear of any liens, charge, claim, encumbrance, pledge, security interest, defect or other restriction or equity of any kind whatsoever.

(j) *Financial Statements.* The financial statements (including the related notes thereto) and schedules included in the Registration Statement, the General Disclosure Package, the Prospectus and the SEC Reports present fairly in all material respects the financial condition of the Company and its consolidated subsidiaries as of the respective dates thereof and their results of operations and cash flows for the respective periods covered thereby, all in conformity with on a consistent basis throughout the entire period involved. The selected financial data and the summary financial information included in the Registration Statement, the General Disclosure Package, the Prospectus and the SEC Reports present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the financial statements included therein and the books and records of the Company and its subsidiaries. No other financial statements, schedules or reconciliations of “non-GAAP financial measures” (as such term is defined by the rules and regulations of the Commission) of the Company are required by the Act or the Rules and

Regulations to be included in the Registration Statement, the General Disclosure Package, the Prospectus or the SEC Reports.

(k) *Independent Accountants*. Marcum LLP (the “Accountants”), who certified the financial statements and supporting schedules of the Company and its subsidiaries included in the Registration Statement, the General Disclosure Package and the Prospectus, are independent accountants as required by the Act, the Exchange Act and the Rules and Regulations and by the rules of the Public Company Accounting Oversight Board (United States) (the “PCAOB”) and, to the Company’s knowledge, such accountants are not in violation of the auditor independence requirements of the Sarbanes-Oxley Act of 2002.

(l) *No Material Adverse Changes*. Since the respective dates as of which information is given in the Registration Statement and the Prospectus and prior to the Closing Date, except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, (i) there has not been a material adverse change, or any development that would be expected to result in a material adverse change, in the business, properties, assets, business prospects, condition (financial or otherwise), results of operations or capitalization of the Company and its subsidiaries, taken as a whole, arising for any reason whatsoever (a “Material Adverse Change”), (ii) 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, (iii) the Company has not paid or declared any dividends or other distributions of any kind on any class of its capital stock, and (iv) the Company has not altered its method of accounting.

(m) *Investment Company*. The Company is not, and, after giving effect to the issuance and sale of the Securities and the use of the proceeds therefrom as described in the General Disclosure Package and the Prospectus under the caption "Use of Proceeds," will not be, required to register as an “investment company” under the Investment Company Act of 1940, as amended, and the rules and regulations of the Commission promulgated thereunder.

(n) *Litigation*. Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, there are no actions, suits or proceedings pending, or to the Company’s knowledge, threatened against or affecting, (i) the Company or any of its subsidiaries, or (ii) any of their respective officers in their capacity as such, before or by any foreign, federal or state court, commission, regulatory body, including, but not limited to, the Financial Industry Regulatory Authority, Inc. (“FINRA”), the NYSE MKT, administrative agency or other governmental body, domestic or foreign, wherein an unfavorable ruling, decision or finding could reasonably be expected to (i) have a Material Adverse Effect, individually or in the aggregate, or (ii) prevent or materially interfere with the consummation of the transactions contemplated hereby or the performance by the Company of its obligations hereunder. The Company has not received any notice of proceedings relating to the revocation or modification of any material authorization, approval, order, license, certificate, franchise or permit. There are no pending investigations known to the Company involving the Company by any governmental agency having jurisdiction over the Company or its business or operations.

(o) *Compliance with Laws and Regulations and Performance of Obligations and Contracts.* The agreements, instruments and other documents described in the Registration Statement, the General Disclosure Package, the Prospectus and the SEC Reports conform to the descriptions thereof contained therein, and there are no agreements, instruments or other documents required by the applicable provisions of the Act, the Rules and Regulations or the Exchange Act to be described in the Registration Statement, the General Disclosure Package or the Prospectus or to be filed with the Commission as exhibits to the Registration Statement that have not been so described or filed. All such documents and Contracts (as defined below) described in the Registration Statement, the General Disclosure Package and the Prospectus or filed as an exhibit to the Registration Statement were duly authorized, executed and delivered by the Company, constitute valid and binding agreements of the Company and are enforceable against the Company in accordance with the respective terms thereof, except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally or general equitable principles. Each of the Company and its subsidiaries has (i) complied in all material respects with all laws, regulations and orders applicable to it or its business and is not in breach or default of any approval, consent, waiver, authorization, exemption, permission, endorsement or license granted by court, administrative agency or other governmental or regulatory body or stock exchange authorities and (ii) performed all obligations required to be performed by it, and is not in default under any indenture, mortgage, deed of trust, voting trust agreement, loan agreement, bond, debenture, note agreement, lease or other agreement or instrument (individually, a "Contract" and collectively, "Contracts") to which it is a party or by which its property is bound or affected, except for such defaults, if any, as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect and would not prevent or materially interfere with the consummation of the transactions contemplated hereby. To the knowledge of the Company and its subsidiaries, no other party under any Contract to which it is a party is in default in any respect thereunder or has given written or oral notice to the Company or its subsidiaries or any of their respective officers or directors of such other party's intention to terminate, cancel or refuse to renew any Contract. Each of the Company and its subsidiaries is not now in violation of any provision of its constitution. The disclosures included in the Registration Statement, the General Disclosure Package and the Prospectus concerning the effects of federal, state, local and foreign laws, rules and regulations on the business of the Company as currently conducted and as proposed to be conducted are correct in all material respects.

(p) *No Consent of Governmental Body Needed.* No consent, approval, authorization, license, registration, qualification or order of, or any filing or declaration with, any court or arbitrator or governmental or regulatory authority, agency or body is required in connection with the authorization, issuance, transfer, sale or delivery of the Securities by the Company, in connection with the execution, delivery and performance of this Agreement by the Company or in connection with the taking by the Company of any action contemplated hereby, except for the filing of the Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement and as have been made or obtained under the Act, the Rules and Regulations, and such as may be required under state securities or Blue Sky laws or the by-laws and rules of FINRA in connection with the purchase and distribution by the Underwriters of the Securities to be sold by the Company.

(q) *Agreements Duly Authorized.* The Company has full corporate power and authority to enter into this Agreement, the Warrants and all other agreements, documents, certificates and instruments required to be delivered pursuant to this Agreement. The Company has duly and validly authorized this Agreement, the Warrants and each of the transactions contemplated thereby. This Agreement and the Warrants have been duly authorized, executed and delivered by the Company and each such document constitutes a valid and binding agreement of the Company enforceable against the Company in accordance with the terms hereof, except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally or general equitable principles. When issued, the Warrants will constitute the legal, valid and binding obligations of the Company, including to issue and sell, upon exercise thereof and payment of the respective exercise prices therefor, the number and type of securities of the Company called for thereby in accordance with the terms thereof, and all such warrants are enforceable against the Company in accordance with their terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally or subject to general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law), and except as enforceability of any indemnification or contribution provision may be limited under federal or state securities laws.

(r) *No Conflicts.* The execution, delivery and performance by the Company of this Agreement and the Warrants and the consummation of the transactions contemplated hereby, and the application of the net proceeds from the offering and sale of the Securities to be sold by the Company in the manner set forth in the General Disclosure Package and the Prospectus under "Use of Proceeds" do not and will not (i) violate the constitution of the Company or (ii) result in the creation or imposition of any lien, charge or encumbrance upon any of the assets of the Company pursuant to the terms or provisions of, or result in a breach or violation of any of the terms or provisions of, or constitute a default under, or give any other party a right to terminate any of its obligations under, or result in the acceleration of any obligation under any Contract to which the Company is a party or by which the Company or any of its properties is bound or affected, except for such liens, breaches, violations, or defaults that would not, individually or in the aggregate, result in a Material Adverse Effect or prevent or materially interfere with the consummation of the transactions contemplated hereby, (iii) violate or conflict with any judgment, ruling, decree, order, law, statute, rule or regulation or any approval, consent, waiver, authorization, exemption, permission, endorsement or license granted by of any court or other governmental agency or body applicable to the business or properties of the Company.

(s) *[Reserved]* .

(t) *Title to Real and Personal Property.* The Company and its subsidiaries have good and marketable title to all properties and assets described in the Registration Statement, the General Disclosure Package and the Prospectus as being owned respectively by them, in each case, free and clear of all liens, charges, encumbrances or restrictions, except (a) as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, or (b) do not, individually or in the aggregate, materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company or any of its

subsidiaries. The Company and its subsidiaries have valid, subsisting and enforceable leases for the properties described in the General Disclosure Package and the Prospectus as leased by them, with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such properties by the Company and its subsidiaries.

(u) *[Reserved]* .

(v) *Statistical and Market Data.* All statistical or market-related data included in the Registration Statement, the General Disclosure Package and the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate, and the Company has obtained the written consent to the use of such data from such sources to the extent required.

(w) *No Price Stabilization or Manipulation.* Neither the Company nor, to its knowledge, any of its directors, officers or controlling persons, has taken, directly or indirectly, any action intended to cause or result in, or which might reasonably be expected to cause or result in, or which has constituted, stabilization or manipulation, under the Act or otherwise, of the price of any security of the Company to facilitate the sale or resale of the Securities.

(x) *No Registration Rights.* No holder of securities of the Company has rights to register any securities of the Company because of the filing of the Registration Statement or the Prospectus or the offering of the Securities, except for rights that have been duly waived by such holder or have expired.

(y) *Exchange Act and Stock Exchange Listing.* Prior to the Closing Date, 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. The Conversion Shares have been approved for listing on the NYSE MKT, subject to official notice of issuance.

(z) *Labor Matters.* Neither the Company nor any of its subsidiaries is involved in any labor dispute except, where the dispute would not, individually or in the aggregate, have a Material Adverse Effect, nor, to the knowledge of the Company, is any such dispute threatened.

(aa) *No Unlawful Payments* . Neither the Company nor any of its subsidiaries, nor any of their respective officers, directors or affiliates, nor, to the knowledge of the Company, any of their respective agents, employees, representatives or other persons acting on behalf of the Company or its subsidiaries, has (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made or taken an act in furtherance of an offer, promise or authorization of any direct or indirect unlawful payment of corporate funds or benefit to any “foreign official”, as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended (the “FCPA”), or any political party or party official or candidate for political office; (iii) violated or is in violation of any provision of the FCPA, the U.K. Bribery Act 2010, the Commonwealth Criminal Code Act 1995 or any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business

Transactions, or violated any other applicable anti-bribery or anti-corruption laws; or (iv) made, offered, agreed, requested or taken an act in furtherance of any unlawful bribe or other unlawful benefit, including, without limitation, any rebate, payoff, influence payment, kickback or other unlawful or improper payment or benefit. The Company has instituted, maintained and enforced, and will continue to maintain and enforce policies and procedures intended to promote and ensure compliance with all applicable anti-bribery and anti-corruption laws.

(bb) *Compliance with Anti-Money Laundering Laws* . The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act and the applicable money laundering statutes of all jurisdictions in which the Company and its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced thereunder by any governmental or regulatory agency (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 against the Company or its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(cc) *No Conflicts with Sanctions Laws* . Neither the Company nor any of its subsidiaries, nor any of their respective directors, officers or affiliates, nor, to the knowledge of the Company, any of their respective agents, employees, representatives or other persons acting on behalf of the Company or its subsidiaries, is currently the subject of any sanctions administered or enforced by the U.S. government (including, without limitation, the Office of Foreign Assets Control of the U.S. Treasury Department (“OFAC”) or the U.S. Department of State and including, without limitation, the designation as a “specially designated national” or “blocked person”), the United Nations Security Council, the European Union or other relevant sanctions authority that corresponds to sanctions imposed by OFAC, the U.S. Department of State, the United Nations Security Council or the European Union (collectively, “Sanctions”), nor is the Company or any of its subsidiaries located, organized or resident in a country or territory that is the subject or the target of Sanctions, including, without limitation, Cuba, Iran, North Korea, Sudan and Syria (each, a “Sanctioned Country”); and the Company will not directly or indirectly use the proceeds of the offering of the Securities hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person that, at the time of such funding or facilitation, is the subject or the target of Sanctions, (ii) to fund or facilitate any activities of or business in any Sanctioned Country or (iii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. For the past five years, the Company and its subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not engage in, any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(dd) *Taxes.* The Company and its subsidiaries have filed all material federal, state and foreign income and franchise tax returns that are required to be filed by them and have paid all taxes required to be filed or paid by them and, if due and payable, any related or similar assessment, fine or penalty levied against them, except for such taxes, assessments, fines or penalties, if any, currently being contested in good faith by appropriate actions and as to which adequate reserves have been established. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 3(j) hereof in respect of all material federal, state and foreign income and franchise taxes for all periods as to which the tax liability of the Company has not been finally determined. The Company and its subsidiaries are not aware of any material claims against them by any taxing authority in relation to the filing of tax returns or the payment of required taxes.

(ee) *Insurance.* The Company and its subsidiaries carry, or are covered by, insurance in such amounts and covering such risks as the Company believes are adequate for the conduct of their business and the value of their properties and is customary for companies engaged in similar industries, and all such insurance is in full force and effect. The Company has no reason to believe that it and its subsidiaries will not be able to (i) renew their existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct their business as currently conducted or proposed to be conducted and at a cost that would not, individually or in the aggregate, result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(ff) *Defined Benefit Plans.* The Company has not maintained or contributed to a defined benefit plan as defined in Section 3(35) of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”). No plan maintained or contributed to by the Company that is subject to ERISA (an “ERISA Plan”) (or any trust created thereunder) has engaged in a “prohibited transaction” within the meaning of Section 406 of ERISA or Section 4975 of the Internal Revenue Code of 1986, as amended (the “Code”) that could subject the Company to any material tax penalty on prohibited transactions and that has not adequately been corrected. Each ERISA Plan is in compliance in all material respects with all reporting, disclosure and other requirements of the Code and ERISA as they relate to such ERISA Plan, except for any noncompliance which would not result in the imposition of a material tax or monetary penalty. With respect to each ERISA Plan that is intended to be “qualified” within the meaning of Section 401(a) of the Code, either (i) a determination letter has been issued by the Internal Revenue Service stating that such ERISA Plan and the attendant trust are qualified thereunder, or (ii) the remedial amendment period under Section 401(b) of the Code with respect to the establishment of such ERISA Plan has not ended and a determination letter application will be filed with respect to such ERISA Plan prior to the end of such remedial amendment period. The Company has never completely or partially withdrawn from a “multiemployer plan,” as defined in Section 3(37) of ERISA.

(gg) *Title to Intellectual Property.* The Company and each of its subsidiaries owns or possesses or has valid rights or licenses to use and practice all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, works of authorship, licenses, inventions, trade secrets, technology, know-how, and

similar rights (“Intellectual Property”) necessary for the conduct of the business of the Company and its subsidiaries as currently carried on and as described in the Registration Statement, the General Disclosure Package and the Prospectus. To the knowledge of the Company, no action or use by the Company or any of its subsidiaries will involve or give rise to any infringement of, or license or similar fees for, any Intellectual Property of others, except where such action, use, license or fee is not reasonably likely to result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received any notice alleging any such infringement or fee, nor is the Company or any of its subsidiaries presently a party in any proceeding in which the Company’s or any of its subsidiaries’ rights or licenses to use or practice such Intellectual Property have been challenged or the validity or enforceability of such Intellectual Property has been challenged, except for the normal filing and prosecuting of any related Intellectual Property applications before applicable Intellectual Property offices or agencies.

(hh) *[Reserved]* .

(ii) *[Reserved]* .

(jj) *Related Party Transactions.* There are no business relationships or related party transactions involving the Company or any other person required to be described in the General Disclosure Package and the Prospectus that have not been described. Without limiting the generality of the immediately preceding sentence, no relationship, direct or indirect, exists between or among the Company on the one hand, and the directors, officers, stockholders, customers or suppliers of the Company on the other hand, that is required to be described in the General Disclosure Package and the Prospectus and that is not so described. Since January 1, 2013, the Company has not, directly or indirectly, extended or maintained credit, arranged to extend credit, or renewed any extension of credit, in the form of a personal loan, to or for any director or executive officer of the Company, or to or for any family member or affiliate of any director or executive officer of the Company in violation of applicable laws, including Section 13(k) of the Exchange Act.

(kk) *Environmental Matters.* Each of the Company and its subsidiaries (i) is in compliance in all material respects with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (collectively, “Environmental Laws”), (ii) except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, has received all permits, licenses or other approvals required of it under applicable Environmental Laws to conduct its businesses and (iii) is in compliance in all material respects with all terms and conditions of any such permit, license or approval.

(ll) *Controls and Procedures* .

(i) *Disclosure Controls and Procedures.* The Company has established and maintains disclosure controls and procedures (as such term is defined in Rules 13a-15 and 15d-15 under the Exchange Act), that (A) are designed to ensure that material information relating to the Company is made known to the Company’s principal executive officer and its principal financial officer by others within the Company and its subsidiaries; (B) provide for the periodic evaluation of the effectiveness of such disclosure controls and procedures, commencing as of the



end of the period covered by the Company's most recent annual or semi-annual report; and (C) are effective in all material respects to perform the functions for which they were established.

(ii) *Internal Control Over Financial Reporting and Internal Accounting Controls*. The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies in all material respects with the requirements of the Exchange Act and has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. The Company's internal control over financial reporting is effective and the Company is not aware of any material weakness (as defined in Rule 1-02 of Regulation S-X of the Commission) in its internal control over financial reporting.

(iii) *No Material Weakness in Internal Controls*. Since the date of the latest audited financial statements included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company is not aware of (x) any significant deficiency in the design or operation of its internal control over financial reporting which is reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial data or any material weaknesses in its internal controls, except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, or in any document incorporated by reference therein, since the end of the Company's most recent audited fiscal year; or (y) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls.

(mm) *Off-Balance Sheet Transactions*. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, there are no material off-balance sheet transactions, arrangements, obligations (including contingent obligations), or any other relationships with unconsolidated entities or other persons, that may have a material current or future effect on the Company's financial condition, changes in financial condition, results of operations, liquidity, capital expenditures, capital resources, or significant components of revenues or expenses.

(nn) *Audit Committee*. The Company's Board of Directors has validly appointed an audit committee whose composition satisfies, and the Board of Directors and/or the audit committee has adopted a charter that satisfies the requirements of, the NYSE MKT. The audit committee has reviewed the adequacy of its charter within the past twelve months. Neither the Board of Directors nor the Audit Committee is aware of (i) any significant deficiency in the design or operation of the Company's internal control over financial reporting which is reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial data or any material weakness in the Company's internal controls; or (ii) any fraud, whether or not material, that involves management or other employees of the Company who have a significant role in the Company's internal controls.

(oo) *Sarbanes-Oxley*. The Company and its Affiliates are in compliance 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 effective as of the date hereof and as of the Closing Date. The Company has not, in violation of the Sarbanes-Oxley Act of 2002, directly or indirectly, extended or maintained credit, arranged for the extension of credit or renewed an extension of credit in the form of a personal loan to or for any director or executive officer of the Company.

(pp) *Accurate Disclosure*. The statements included in the Registration Statement, the General Disclosure Package and the Prospectus under the captions “Risk Factors,” “Business Government Regulation,” “Description of Capital Stock” and “Description of Securities We are Offering,” insofar as such statements contain descriptions of the terms of statutes, rules, regulations, legal or governmental proceedings, the Company’s constitution provisions or legal conclusions, are a fair and accurate summary in all material respects, of the matters referred to therein.

(qq) *Clinical Trials*. The clinical, pre-clinical and other studies and tests conducted by or on behalf of or sponsored by the Company or its subsidiaries that are described or referred to in the Registration Statement, the General Disclosure Package and the Prospectus were and, if still pending, are being conducted in accordance with all statutes, laws, rules and regulations, as applicable (including, without limitation, those administered by the FDA or by any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA). The descriptions of the results of such studies and tests that are described or referred to in the Registration Statement, the General Disclosure Package and the Prospectus are accurate and complete in all material respects and fairly present the published data derived from such studies and tests, and each of the Company and its subsidiaries has no knowledge of other studies or tests the results of which are materially inconsistent with or otherwise call into question the results described or referred to in the Registration Statement, the General Disclosure Package and the Prospectus. Neither the Company nor its subsidiaries has received any notices or other correspondence from the FDA or any other foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA with respect to any ongoing clinical or pre-clinical studies or tests requiring the termination or suspension of such studies or tests. For the avoidance of doubt, the Company makes no representation or warranty that the results of any studies, tests or preclinical or clinical trials conducted by or on behalf of the Company will be sufficient to obtain governmental approval from the FDA or any foreign, state or local governmental body exercising comparable authority.

(rr) *Regulatory Filings*. Except as would not be reasonably expected to result in a Material Adverse Effect, neither the Company nor any of its subsidiaries has failed to file with the applicable regulatory authorities (excluding the FDA or any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA) any filing, declaration, listing, registration, report or submission that is required to be so filed. Neither the Company nor any of its subsidiaries has failed to file with the FDA or any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA, any filing, declaration, listing, registration, report or submission that is required to be so filed. All such filings, declarations, listings, registrations, reports or submissions

were in material compliance with applicable laws when filed; all such filings, declarations, listings, registrations, reports or submissions were, when filed, timely, complete and accurate in all material respects and not misleading in any material respect (or were corrected or supplemented by a subsequent submission); and no deficiencies have been asserted by any applicable regulatory authority (including, without limitation, the FDA or any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA) with respect to any such filings, declarations, listings, registrations, reports or submissions.

(ss) *Licenses and Permits* . Except as would not, individually or in the aggregate, have a Material Adverse Effect, (i) the Company and its subsidiaries hold, and are operating in compliance with, such permits, licenses, franchises, registrations, exemptions, approvals, authorizations and clearances of any other governmental authorities (including, without limitation, the FDA) required for the conduct of its business as currently conducted (collectively, the “ Permits ”), and all such Permits are in full force and effect; and (ii) the Company and its subsidiaries have fulfilled and performed all of their obligations with respect to the Permits, and, to the Company’s knowledge, no event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other impairment of the rights of the holder of any Permit. All applications, notifications, submissions, information, claims, reports and statistics, and other data and conclusions derived therefrom, utilized as the basis for any and all requests for a Permit from the FDA or other governmental authority relating to the Company or a subsidiary, its business and its products, when submitted to the FDA or other governmental authority by or on behalf of the Company or a subsidiary, were true, complete and correct in all material respects (or were corrected or supplemented by a subsequent submission). Any necessary or required updates, changes, corrections or modification to such applications, notifications, submissions, information, claims, reports and statistics and other data have been submitted to the FDA or other governmental authority, except as would not, individually or in the aggregate, have a Material Adverse Effect. The Company and its subsidiaries have not received any notification, correspondence or any other written or oral communication, including notification of any pending or, to the Company’s knowledge, threatened claim, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any governmental authority, including, without limitation, the FDA or the United States Drug Enforcement Administration (“ DEA ”), of potential or actual material non-compliance by, or material liability of, the Company or a subsidiary under any Permits. To the Company’s knowledge, there are no facts or circumstances that would reasonably be expected to give rise to any material liability of the Company or a subsidiary under any Permits.

(tt) *Compliance with Certain Regulatory Matters* . The Company, its subsidiaries and their respective officers and directors and, to the Company’s knowledge, their respective employees and agents have operated and currently are in compliance in all material respects with applicable statutes and implementing regulations administered or enforced by the FDA, DEA, or any other federal, state, local, or foreign governmental authority, including, without limitation, the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)); the Civil Monetary Penalties Law (42 U.S.C. § 1320a-7a); the civil False Claims Act (31 U.S.C. §§ 3729 et seq.); all applicable federal, state, local and foreign criminal laws relating to health care fraud and abuse, including but not limited to the administrative False Claims Law (42 U.S.C. § 1320a-7b(a)); 18 U.S.C. Sections 286 and 287; the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. § 1320d et

seq.), as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. §§ 17921 et seq.); the exclusion laws (42 U.S.C. § 1320a-7); the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§ 301 et seq.); Medicare (Title XVIII of the Social Security Act); Medicaid (Title XIX of the Social Security Act); the Patient Protection and Affordable Care Act of 2010 (Pub. Law 111-148), as amended by the Health Care and Education Reconciliation Act of 2010 (Pub. Law 111-152); and the regulations promulgated pursuant to such laws; and any other applicable local, state, federal or foreign law or regulation. Neither the Company nor its subsidiaries are a party to, and do not have any ongoing reporting obligations pursuant to, any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement imposed by any governmental authority. Neither the Company, its subsidiaries nor, to the knowledge of the Company, any of their respective directors, officers, employees or agents has been debarred, excluded or suspended from participation in or receiving payment from any federal, state or local government health care program, or is subject to an audit, investigation, proceeding, or other similar action by any governmental authority that could reasonably be expected to result in debarment, suspension, or exclusion.

(uu) *Absence of Certain Regulatory Actions* . Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, or as would not, individually or in the aggregate, have a Material Adverse Effect, the Company and its subsidiaries have not had any product or manufacturing site (whether Company-owned or that of a contract manufacturer for Company products or product candidates) subject to a governmental authority (including, without limitation, the FDA) shutdown or import or export prohibition, nor received any FDA Form 483 or other governmental authority notice of inspectional observations, “warning letters,” “untitled letters,” requests to make changes to the Company products, processes or operations, or similar correspondence or notice from the FDA or other governmental authority alleging or asserting material noncompliance with any applicable laws. To the Company’s knowledge, neither the FDA nor any other governmental authority has threatened such action. Neither the Company nor its subsidiaries have received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court, arbitrator, Regulatory Agency, or other governmental authority or third party alleging that any product operation or activity is in violation of any health care laws nor, to the Company’s knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened.

(vv) *SEC Reports*. The Company has filed all reports, schedules, forms, statements or other documents required to be filed by the Company under the Act or Exchange Act, during the twelve months preceding the date hereof (the foregoing materials filed during such twelve-month period, including the exhibits thereto and documents incorporated by reference therein, the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension; as of their respective filing or amendment dates, the SEC Reports complied in all material respects with the requirements of the Exchange Act and the rules and regulations of the Commission promulgated thereunder; and as of their respective filing or amendment dates, the SEC Reports did not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. All SEC Reports

are readily available and accessible on the Company's website. The Company has never been an issuer subject to Rule 144(i) under the Act.

(ww) *[Reserved]* .

(xx) *[Reserved]* .

(yy) *No Rating* . Neither the Company nor any of its subsidiaries has debt securities or preferred stock that is rated by any "nationally recognized statistical rating organization" (as such term is defined in Section 3(a)(62) of the Exchange Act).

(zz) *No Broker's Fees* . The Company is not a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against the Company or the Underwriters for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Securities.

([[) *No Immunity* . Neither the Company nor any of its subsidiaries nor any of its or their respective properties or assets has any immunity from the jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution or otherwise) under the laws of the United States; and, to the extent that the Company, any subsidiary of the Company or any of their respective properties or assets may have or may hereafter become entitled to any such right of immunity in any such court in which proceedings may at any time be commenced, each of the Company and its subsidiaries waives or will waive such right to the extent permitted by law and has consented to such relief and enforcement as provided in Section 8 of this Agreement.

(aaa) *Insolvency*. No event of insolvency has occurred in relation to the Company or its subsidiaries, nor is there, nor will there be at the Closing Date, any act which has occurred or, to the best of the Company's knowledge, is anticipated to occur which is likely to result in an event of insolvency in relation to the Company or its subsidiaries.

(bbb) *Shareholder Approvals*. The Company has obtained all shareholder or other third party approvals which are required to be obtained under applicable law in connection with the issuance, transfer, sale or delivery of the Securities by the Company or in connection with the execution, delivery and performance of this Agreement.

(ccc) *No Integration* . Neither the Company, its officers and directors, nor any of their affiliates has, prior to the date hereof, directly or indirectly, made any offer or sale of any securities which are required to be "integrated" pursuant to the Act or the Rules and Regulations with the offer and sale of the Securities pursuant to the Registration Statement. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, neither the Company, its officers and directors, nor any of its affiliates has sold or issued any security of the Company during the six-month period preceding the date of the Prospectus, including but not limited to any sales pursuant to Rule 144A, Regulation D or Regulation S under the Act, other than common stock issued pursuant to employee benefit plans, qualified stock option plans or employee

compensation plans or pursuant to outstanding options, rights or warrants as described in the Registration Statement, the General Disclosure Package and the Prospectus.

4. Agreements of the Company. The Company agrees with the Underwriters as follows:

(a) *Amendments and Supplements to Registration Statement*. The Company shall not, either prior to any effective date or thereafter during such period as the Prospectus is required by law to be delivered (whether physically or through compliance with Rule 172 of the Rules and Regulations or any similar rule) (the “Prospectus Delivery Period”) in connection with sales of the Securities by an Underwriter or dealer, amend or supplement the Registration Statement, the General Disclosure Package or the Prospectus, unless a copy of such amendment or supplement thereof shall first have been submitted to the Representative within a reasonable period of time prior to the filing or, if no filing is required, the use thereof and the Representative shall not have objected thereto in good faith.

(b) *Amendments and Supplements to the Registration Statement, the General Disclosure Package, and the Prospectus and Other Securities Act Matters*. During the Prospectus Delivery Period, the Company will comply with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act so far as necessary to permit the continuance of sales of or dealings in the Securities as contemplated by the provisions hereof, the General Disclosure Package, the Registration Statement and the Prospectus. If, during the Prospectus Delivery Period, any event or development shall occur or condition exist as a result of which the General Disclosure Package or the Prospectus, as then amended or supplemented, would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing or under which they were made, as the case may be, not misleading, or if it shall be necessary to amend or supplement the General Disclosure Package or the Prospectus in order to make the statements therein, in the light of the circumstances then prevailing or under which they were made, as the case may be, not misleading, or if in the opinion of the Representative it is otherwise necessary to amend or supplement the Registration Statement, the General Disclosure Package or the Prospectus, or to file a new registration statement containing the Prospectus, in order to comply with the Act, the Rules and Regulations, the Exchange Act or the Exchange Act Rules, including in connection with the delivery of the Prospectus, the Company agrees to (i) promptly notify the Representative of any such event or condition and (ii) promptly prepare (subject to Section 4(a) and 4(f) hereof), file with the Commission (and use its best efforts to have any amendment to the Registration Statement or any new registration statement to be declared effective) and furnish at its own expense to the Representative (and, if applicable, to dealers), amendments or supplements to the Registration Statement, the General Disclosure Package or the Prospectus, or any new registration statement, necessary in order to make the statements in the General Disclosure Package or the Prospectus as so amended or supplemented, in the light of the circumstances then prevailing or under which they were made, as the case may be, not misleading, or so that the Registration Statement or the Prospectus, as amended or supplemented, will comply with the Act, the Rules and Regulations, the Exchange Act or the Exchange Act Rules or any other applicable law.

(c) *Notifications to the Underwriters.* The Company shall use its best efforts to cause the Registration Statement to become effective, and shall notify the Representative promptly, and shall confirm such advice in writing, (i) when any post-effective amendment to the Registration Statement has become effective and when any post-effective amendment thereto becomes effective, (ii) of any request by the Commission for amendments or supplements to the Registration Statement or the Prospectus or for additional information, (iii) of the commencement by the Commission or by any state securities commission of any proceedings for the suspension of the qualification of any of the Securities for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose, including, without limitation, the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose or the threat thereof, (iv) of the happening of any event during the Prospectus Delivery Period that in the judgment of the Company makes any statement made in the Registration Statement or the Prospectus misleading (including by omission) or untrue or that requires the making of any changes in the Registration Statement or the Prospectus in order to make the statements therein, in light of the circumstances in which they are made, not misleading (including by omission), and (v) of receipt by the Company or any representative of the Company of any other communication from the Commission relating to the Company, the Registration Statement, any preliminary prospectus or the Prospectus. If at any time the Commission shall issue any order suspending the effectiveness of the Registration Statement, the Company shall use best efforts to obtain the withdrawal of such order at the earliest possible moment. The Company shall comply with the provisions of and make all requisite filings with the Commission pursuant to Rules 424(b), 430A, 430B and 462(b) of the Rules and Regulations and to notify the Representative promptly of all such filings.

(d) *Executed Registration Statement.* The Company shall furnish to the Representative, without charge, one signed copy of the Registration Statement, and of any post-effective amendment thereto, including financial statements and schedules, and all exhibits thereto, and shall furnish to the Representative, without charge, a copy of the Registration Statement and any post-effective amendment thereto, including financial statements and schedules but without exhibits.

(e) *Undertakings.* The Company shall comply with all the provisions of any undertakings contained and required to be contained in the Registration Statement.

(f) *Prospectus.* The Company shall prepare the Prospectus in a form approved by the Representative and shall file such Prospectus with the Commission pursuant to Rule 424(b) of the Rules and Regulations with a filing date not later than the second business day following the execution and delivery of this Agreement. Promptly after the effective date of the Registration Statement, and thereafter from time to time during the period when the Prospectus is required (or, but for the provisions of Rule 172 under the Act, would be required) to be delivered, the Company shall deliver to the Representative, without charge, as many copies of the Prospectus and any amendment or supplement thereto as the Representative may reasonably request. The Company consents to the use of the Prospectus and any amendment or supplement thereto by the Representative and by all dealers to whom the Securities may be sold, both in connection with the offering or sale of the Securities and for any period of time thereafter during the Prospectus Delivery Period. If,

during the Prospectus Delivery Period any event shall occur that in the judgment of the Company or counsel to the Underwriters should be set forth in the Prospectus in order to make any statement therein, in the light of the circumstances under which it was made, not misleading (including by omission), or if it is necessary to supplement or amend the Prospectus to comply with law, the Company shall forthwith prepare and duly file with the Commission an appropriate supplement or amendment thereto, and shall deliver to the Representative, without charge, such number of copies thereof as the Representative may reasonably request.

(g) *Permitted Free Writing Prospectuses.* The Company represents and agrees that it has not made and, unless it obtains the prior consent of the Representative, will not make, any offer relating to the Securities that would constitute a “free writing prospectus” as defined in Rule 405 of the Rules and Regulations, required to be filed with the Commission or retained by the Company under Rule 433 of the Rules and Regulations; *provided* that the prior written consent of the Representative hereto shall be deemed to have been given in respect of the Issuer Free Writing Prospectuses included in Schedule I hereto. Any such free writing prospectus consented to by the Representative is herein referred to as a “Permitted Free Writing Prospectus.” The Company agrees that (i) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus, and (ii) has complied and will comply, as the case may be, with the requirements of Rules 164 and 433 of the Act applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the Commission, legending and record keeping. If at any time following the issuance of an Issuer Free Writing Prospectus there occurs an event or development as a result of which such Issuer Free Writing Prospectus would conflict with the information contained in the Registration Statement relating to the Securities or would include an untrue statement of material fact or would omit to state a material fact necessary in order to make the statements therein, in light of the circumstances prevailing at that subsequent time, not misleading, the Company will promptly notify the Representative and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement, or omission. The Company represents that it has satisfied and agrees that it will satisfy the conditions in Rule 433 to avoid a requirement to file with the Commission any electronic road show.

(h) *Compliance with Blue Sky Laws.* Prior to any public offering of the Securities by the Underwriters, the Company shall cooperate with the Representative and counsel to the Underwriters in connection with the registration or qualification (or the obtaining of exemptions from the application thereof) of the Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Representative may request limitation, *provided*, *however*, that in no event shall the Company be obligated to qualify a public offering outside the United States or to do business as a foreign corporation in any jurisdiction where it is not now so qualified, to qualify or register as a dealer in securities, to take any action which would subject it to general service of process in any jurisdiction where it is not now so subject or subject itself to ongoing taxation in respect of doing business in any jurisdiction in which it is not so subject.

(i) *Delivery of Financial Statements.* During the period of five years commencing on the effective date of the Registration Statement applicable to the Underwriters, the Company shall furnish to the Representative and each other Underwriter who may so request copies



of such financial statements and other periodic and special reports as the Company may from time to time distribute generally to the holders of any class of its capital stock, and will furnish to the Representative and each other Underwriter who may so request a copy of each annual or other report it shall be required to file with the Commission; provided, however, that the availability of electronically transmitted copies filed with the Commission pursuant to EDGAR shall satisfy the Company's obligation to furnish copies hereunder.

(j) *Availability of Earnings Statements.* The Company shall make generally available to holders of its securities as soon as may be practicable but in no event later than the last day of the fifteenth (15<sup>th</sup>) full calendar month following the calendar quarter in which the most recent effective date occurs in accordance with Rule 158 of the Rules and Regulations, an earnings statement (which need not be audited but shall be in reasonable detail) for a period of twelve (12) months ended commencing after the effective date, and satisfying the provisions of Section 11(a) of the Act (including Rule 158 of the Rules and Regulations).

(k) *Consideration; Payment of Expenses.* In consideration of the services to be provided for hereunder, the Underwriters or their respective designees shall receive an underwriting discount equal to seven percent (7.0%) of the aggregate gross proceeds raised in the offering.

(i) A warrant solicitation fee of three percent (3.0%) of the gross cash proceeds received by the Company from time to time in connection with the exercise of any Warrant in compliance with FINRA Rule 5110(f)(2)(J), payable within three (3) business days of receipt by the Company of any proceeds from the exercise of such Warrant.

(ii) Provided that aggregate net proceeds actually received by the Company on the Closing Date from the sale of Units is at least \$8.0 million, the Company grants the Representative the right of first refusal for a period of nine (9) months from the date of commencement of sales pursuant to the Prospectus to act as lead managing underwriter and sole book runner for any and all future underwritten public equity or convertible debt offerings undertaken by the Company in the United States. The Company shall provide written notice to the Representative with the terms of such offering and if the Representative fails to accept in writing any such proposal within ten (10) days after receipt of such written notice, then the Representative will have no claim or right with respect to any such offering.

(iii) The Representative reserves the right to reduce any item of compensation or adjust the terms thereof as specified herein in the event that a determination shall be made by FINRA to the effect that the Underwriters' aggregate compensation is in excess of FINRA rules or that the terms thereof require adjustment.

(iv) Whether or not the transactions contemplated by this Agreement, the Registration Statement and the Prospectus are consummated or this Agreement is terminated, the Company hereby agrees to pay the following:

(1) all expenses in connection with the preparation, printing, formatting for EDGAR and filing of the Registration Statement, any Preliminary Prospectus and the Prospectus and any and all exhibits, amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers;

- (2) all fees and expenses in connection with filings with FINRA's Public Offering System;
- (3) all fees, disbursements and expenses of the Company's counsel, accountants and other agents and representatives in connection with the registration of the Securities under the Act and the offering;
- (4) all expenses in connection with the qualifications of the Securities for offering and sale under state or foreign securities or blue sky laws (including, without limitation, all filing and registration fees, and up to \$5,000 in fees and disbursements of Underwriters' counsel;
- (5) all fees and expenses in connection with listing the Securities on a national securities exchange;
- (6) all expenses, including travel and lodging expenses, of the Company's officers, directors and employees and any other expense of the Company incurred in connection with attending or hosting meetings with prospective purchasers of the Securities;
- (7) any stock transfer taxes or other taxes incurred in connection with this Agreement or the offering, including any stock transfer taxes payable upon the transfer of securities to the Underwriters;
- (8) the costs associated with preparing, printing and delivering certificates representing the Securities;
- (9) the cost and charges of any transfer agent or registrar for the Securities;
- (10) subject to the following proviso, other costs (including Underwriters' counsel's fees and expenses) and expenses incident to the Offering that are not otherwise specifically provided for in this Section 4(k);

*provided, however*, that all such costs and expenses (including Underwriters' counsel's fees and expenses) that are incurred by the Underwriters shall not exceed \$60,000 in the aggregate, which amount includes the \$30,000 advance previously paid by the Company to the Representative, and Maxim shall return any portion of advances not applied to actual out-of-pocket expenses.

(l) *Reimbursement of Expenses upon Termination of Agreement.* If this Agreement shall be terminated by the Company pursuant to any of the provisions hereof or if for any reason the Company shall be unable to perform its obligations or to fulfill any conditions hereunder, or if the Underwriters shall terminate this Agreement pursuant to the last paragraph of Section 5, Section 7(a), Section 7(e) or Section 7(f), the Company shall reimburse the Underwriters for all out-of-pocket expenses (including the reasonable fees, disbursements and other charges of counsel to the Underwriter) actually incurred by the Underwriters in connection herewith and as allowed under FINRA Rule 5110; *provided, however*, that the maximum amount of costs and expenses to be reimbursed by Company to the Underwriters pursuant to this Section 4(l) shall not

exceed \$60,000 (including the reasonable fees, disbursements and other charges of counsel to the Underwriters), which amount includes the advance of \$30,000 previously paid by the Company to the Underwriters. If the Underwriters' expenses through the date of termination of this Agreement are less than \$60,000, it shall return any portion of the advance not used for actual expenses.

(m) *No Stabilization or Manipulation.* The Company shall not at any time, directly or indirectly, take any action intended to cause or result in, or which might reasonably be expected to cause or result in, or which will constitute, stabilization or manipulation, under the Act or otherwise, of the price of the Shares or the Securities to facilitate the sale or resale of any of the Securities.

(n) *Use of Proceeds.* The Company shall apply the net proceeds from the offering and sale of the Securities to be sold by the Company in the manner set forth in the General Disclosure Package and the Prospectus under "Use of Proceeds" and shall file such reports with the Commission with respect to the sale of the Securities and the application of the proceeds therefrom as may be required in accordance with Rule 463 under the Act.

(o) *Lock-Up Agreements of Company, Management and Affiliates.* The Company shall not, for a period of ninety (90) days after the Closing Date (the "Lock-Up Period"), without the prior written consent of Maxim (which consent may be withheld in its sole discretion), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, or file with the Commission a registration statement under the Act to register, any shares of common stock warrants, or any securities convertible into or exercisable or exchangeable for common stock or (2) enter into any swap or other derivatives transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic benefits or risks of ownership of shares of common stock, or warrants, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock, warrants or other securities, in cash or otherwise, or publicly disclose the intention to enter into any transaction described in clause (1) or (2) above; provided, that, the Lock-Up Period shall be for a period of thirty (30) days after the date of Prospectus for any securities issued pursuant to that certain Controlled Equity Offering Sales Agreement, dated April 18, 2013, by and between the Company and Cantor Fitzgerald & Co. The foregoing sentence shall not apply to (A) the Securities to be sold hereunder, (B) any shares of common stock issued pursuant to a trading plan established prior to March 23, 2017 pursuant to Rule 10b5-1 of the Exchange Act, and (C) the issuance of Common Stock upon the exercise of warrants as disclosed as outstanding in the Registration Statement, the General Disclosure Package or the Prospectus. The Company has caused each of its officers and directors to enter into agreements with the Representative in the form set forth in Exhibit B.

(p) *Lock-Up Releases.* If Maxim, in its sole discretion, agrees to release or waive the restrictions set forth in a lock-up letter described in Section 4(o) hereof for an officer or director of the Company and provides the Company with notice of the impending release or waiver at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Exhibit C hereto through a major news service at least two business days before the effective date of such

release or waiver, or any other method that satisfies the obligations described in FINRA Rule 5131(d)(2) at least two business days before the effective date of the release or waiver.

(q) *NYSE MKT listing*. The Company will use its reasonable best efforts to effect and maintain the listing of the Common Stock on the NYSE MKT for at least three (3) years after the Closing Date.

5. Conditions of the Obligations of the Underwriters. The obligation of the Underwriters to purchase the Units on the Closing Date as provided herein is subject to the accuracy of the representations and warranties of the Company, the performance by the Company of its covenants and other obligations hereunder and to the following additional conditions:

(a) *Post Effective Amendments and Prospectus Filings*. Notification that the Registration Statement has become effective shall be received by the Representative not later than 4:30 p.m., New York City time, on the date of this Agreement or at such later date and time as shall be consented to in writing by the Representative and all filings made pursuant to Rules 424, 430A, or 430B of the Rules and Regulations, as applicable, shall have been made or will be made prior to the Closing Date in accordance with all such applicable rules.

(b) *No Stop Orders, Requests for Information and No Amendments*. (i) No stop order suspending the effectiveness of the Registration Statement shall have been issued and no proceedings for that purpose shall be pending or are, to the knowledge of the Company, threatened by the Commission, (ii) no order suspending the qualification or registration of the Securities under the securities or Blue Sky laws of any jurisdiction shall be in effect and no proceeding for such purpose shall be pending before or threatened or contemplated by the authorities of any such jurisdiction, (iii) any request for additional information on the part of the staff of the Commission or any such authorities shall have been complied with to the satisfaction of the staff of the Commission or such authorities and (iv) after the date hereof no amendment or supplement to the Registration Statement or the Prospectus shall have been filed unless a copy thereof was first submitted to the Representative and the Representative did not object thereto in good faith, and the Representative shall have received certificates, dated the Closing Date and signed by the Chief Executive Officer or the Chairman of the Board of Directors and the Chief Financial Officer of the Company in their capacities as such, and not individually, (who may, as to proceedings threatened, certify to their knowledge), to the effect of clauses (i), (ii) and (iii).

(c) *No Material Adverse Changes*. Since the respective dates as of which information is given in the Registration Statement and the Prospectus, except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus (i) there shall not have been a Material Adverse Change, (ii) the Company shall not have incurred any material liabilities or obligations, direct or contingent, (iii) the Company shall not have entered into any material transactions not in the ordinary course of business other than pursuant to this Agreement and the transactions referred to herein, (iv) the Company shall not have issued any securities (other than the Securities or the Shares issued in the ordinary course of business pursuant to existing employee benefit plans of the Company referred to in the Registration Statement, General Disclosure Package and the Prospectus) or declared or paid any dividend or made any distribution in respect of its capital

stock of any class or debt (long-term or short-term), and (v) no material amount of the assets of the Company shall have been pledged, mortgaged or otherwise encumbered.

(d) *No Actions, Suits or Proceedings.* Since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package and the Prospectus, there shall have been no actions, suits or proceedings instituted, or to the Company's knowledge, threatened against or affecting, the Company or its subsidiaries or any of their respective officers in their capacity as such, before or by any federal, state or local court, commission, regulatory body, administrative agency or other governmental body, domestic or foreign.

(e) *All Representations True and Correct and All Conditions Fulfilled.* Each of the representations and warranties of the Company contained herein shall be true and correct as of the date of the Agreement and at the Closing Date as if made at the Closing Date and all covenants and agreements contained herein to be performed by the Company and all conditions contained herein to be fulfilled or complied with by the Company at or prior to the Closing Date shall have been duly performed, fulfilled or complied with.

(f) *Opinions of Counsel to the Company.* The Underwriters shall have received the opinions and letters, each dated the Closing Date each reasonably satisfactory in form and substance to the Representative and counsel for the Underwriters, from Cooley LLP, corporate/securities counsel to the Company, and Fish & Richardson P.C., intellectual property counsel to the Company.

(g) *Opinion of Counsel to the Underwriters.* The Representative shall have received an opinion, dated the Closing Date from Ellenoff Grossman & Schole LLP, U.S. securities counsel to the Underwriters, with respect to the Registration Statement, the Prospectus and this Agreement, which opinions shall be satisfactory in all respects to the Representative.

(h) *Accountants' Comfort Letter.* On the date of the Prospectus, the Representative shall have received from the Accountants a letter dated the date of its delivery, addressed to the Underwriters, in form and substance reasonably satisfactory to the Representative and counsel to the Underwriters, containing statements and information of the type ordinarily included in accountant's "comfort letters" to underwriters, delivered according to Statement of Auditing Standards No. 72 (or any successor bulletin), with respect to the audited and unaudited financial statements and certain financial information contained in the Registration Statement and the Prospectus. At the Closing Date, the Representative shall have received from the Accountants a letter dated such date, in form and substance reasonably satisfactory to the Representative and counsel to the Underwriters, to the effect that they reaffirm the statements made in the letter furnished by them pursuant to the preceding sentence and have conducted additional procedures with respect to certain financial figures included in the Prospectus, except that the specified date referred to therein for the carrying out of procedures shall be no more than three business days prior to the Closing Date.

(i) *Officers' Certificates.* At the Closing Date, there shall be furnished to the Representative an accurate certificate, dated the date of its delivery, signed by each of the Chief Executive Officer and the Vice President, Finance of the Company, in their capacities as such, and

not individually, in form and substance satisfactory to the Representative and counsel to the Underwriters, to the effect that:

- (i) each signer of such certificate has carefully examined the Registration Statement and the Prospectus;
- (ii) there has not been a Material Adverse Change; and
- (iii) with respect to the matters set forth in Sections 5(b)(i) and 5(e).

(j) **[Reserved]** .

(k) *Transfer Agent's Certificate* . The Company's transfer agent shall have furnished or caused to be furnished to the Representative a certificate satisfactory to the Representative of one of its authorized officers with respect to the issuance of the Securities and such other customary matters related thereto as the Representative may reasonably request.

(l) *Eligible for DTC Clearance* . At or prior to the Closing Date, the Securities shall be eligible for clearance and settlement through the facilities of the DTC.

(m) *Lock-Up Agreements*. At the date of this Agreement, the Representative shall have received the executed "lock-up" agreements referred to in Section 4(o) hereof from the Company's officers and directors.

(n) *Compliance with Blue Sky Laws*. The Securities shall be qualified for sale in such states and jurisdictions as the Representative may reasonably request, including, without limitation, qualification for exemption from registration or prospectus delivery requirements in the provinces and territories of Canada and other jurisdictions outside the United States, and each such qualification shall be in effect and not subject to any stop order or other proceeding on the Closing Date.

(o) **[Reserved]** .

(p) *Exchange Act Registration*. One or more registration statements in respect of the Securities have been filed on Form 8-A pursuant to Section 12(b) of the Exchange Act, each of which registration statement complies in all material respects with the Exchange Act.

(q) *Good Standing*. At the Closing Date, the Company shall have furnished to the Representative satisfactory evidence of the good standing of the Company and its subsidiaries, in their respective jurisdictions of organization (to the extent the concept of "good standing" or such equivalent concept exists under the laws of the applicable jurisdictions) and their good standing as foreign entities in such other jurisdictions as the Representative may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions. If the applicable jurisdiction does not have a concept of "good standing," the Company will furnish evidence in writing or any standard form of telecommunication from the appropriate governmental authorities that the relevant company was duly incorporated and remains duly registered in the jurisdiction of its incorporation.

(r) *Company Certificates.* The Company shall have furnished to the Representative such certificates, in addition to those specifically mentioned herein, as the Representative may have reasonably requested as to the accuracy and completeness at the Closing Date of any statement in the Registration Statement, the General Disclosure Package or the Prospectus, as to the accuracy at the Closing Date of the representations and warranties of the Company herein, as to the performance by the Company of its obligations hereunder, or as to the fulfillment of the conditions concurrent and precedent to the obligations hereunder of the Underwriters.

(s) *No Objection.* FINRA has confirmed that it has not raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements relating to the offering of the Securities.

(t) *Subsequent Equity Sales.*

(i) From the date hereof until the date that is thirty (30) days following the date hereof, 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.

(ii) From the date hereof until the date that is thirty (30) days following the date hereof, 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. “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.

Notwithstanding the foregoing, this Section 5(t) shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance. “Exempt Issuance” means the issuance of (a) shares of Common Stock or options to employees, officers or directors of the Corporation pursuant to any stock or option plan duly adopted by a majority of the non-employee members of the Board of Directors of the Corporation or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company, (b) any shares of Common Stock or Common Stock Equivalents issued or issuable pursuant to that certain Controlled Equity Offering Sales Agreement, dated April 18, 2013, by and between the Company and Cantor Fitzgerald & Co.; *provided*, that such agreement is not amended,

modified or revised after the date hereof, (c) securities to be sold pursuant to and issuable upon the exercise or exchange of or conversion of any securities issued pursuant to the Transaction Documents and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of the Underwriting Agreement, provided that such securities have not been amended since the date of the Underwriting Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of any such securities, and (d) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Corporation, provided that any such issuance shall only be to a Person (or to the equityholders of a Person) which is, itself or through its subsidiaries, an operating company or an asset in a business synergistic with the business of the Corporation and shall provide to the Corporation additional benefits in addition to the investment of funds, but shall not include a transaction in which the Corporation is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

If any of the conditions hereinabove provided for in this Section 5 shall not have been fulfilled when and as required by this Agreement to be fulfilled, the obligations of the Underwriters hereunder may be terminated by the Representative by notifying the Company of such termination in writing at or prior to the Closing Date.

6. Indemnification.

(a) *Indemnification of the Underwriters*. The Company shall indemnify and hold harmless each Underwriter, its affiliates, the directors, officers, employees and agents of such Underwriter and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Act or Section 20 of the Exchange Act from and against any and all losses, claims, liabilities, expenses and damages (including any and all investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding between any of the indemnified parties and any indemnifying parties or between any indemnified party and any third party, or otherwise, or any claim asserted), to which they, or any of them, may become subject under the Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or are based on (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including the information deemed to be a part of the Registration Statement at the time of effectiveness and at any subsequent time pursuant to Rules 430A and 430B of the Rules and Regulations, as applicable, or the omission or alleged omission thereof of a material fact required to be stated therein or necessary to make the statements therein not misleading or (ii) any untrue statement or alleged untrue statement of a material fact contained in any preliminary prospectus, any preliminary prospectus supplement, any Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement to any of the foregoing) or the omission or alleged omission thereof of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading or (iii) any untrue statement or alleged untrue statement of a material fact contained in any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Securities, including any roadshow or investor presentations made to investors by the Company (whether in person or electronically)



(collectively, Marketing Materials”) or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading or (iv) in whole or in part any inaccuracy in any material respect in the representations and warranties of the Company contained herein; *provided, however*, that the Company shall not be liable to the extent that such loss, claim, liability, expense or damage is based on any untrue statement or omission or alleged untrue statement or omission made in reliance on and in conformity with Underwriters’ Information. This indemnity agreement will be in addition to any liability that the Company might otherwise have.

(b) *Indemnification of the Company.* Each Underwriter, severally and not jointly, agrees to indemnify and hold harmless the Company, its affiliates, the directors, officers, employees and agents of the Company and each other person or entity, if any, who controls the Company within the meaning of Section 15 of the Act or Section 20 of the Exchange Act, against any losses, liabilities, claims, damages and expenses whatsoever, as incurred (including but not limited to reasonable attorneys’ fees and any and all reasonable expenses whatsoever, incurred in investigating, preparing or defending against any litigation, commenced or threatened, or any claim whatsoever, and any and all amounts paid in settlement of any claim or litigation), joint or several, to which they or any of them may become subject under the Act, the Exchange Act or otherwise, insofar as such losses, liabilities, claims, damages or expenses (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement at the time of effectiveness and at any subsequent time pursuant to Rules 430A and 430B of the Rules and Regulations, any Preliminary Prospectus, the Prospectus, or any amendment or supplement to any of them, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that any such loss, liability, claim, damage or expense (or action in respect thereof) arises out of or is based upon any such untrue statement or alleged untrue statement or omission or alleged omission made therein in reliance upon the Underwriters’ Information; provided, however, that in no case shall any Underwriter be liable or responsible for any amount in excess of the underwriting discount and commissions applicable to the Securities purchased by such Underwriter hereunder. The parties agree that such information provided by or on behalf of the Underwriters through the Representative consists solely of the material referred to in the last sentence of Section 3(c) hereof.

(c) *Indemnification Procedures.* Any party that proposes to assert the right to be indemnified under this Section 6 shall, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 6, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party shall not relieve the indemnifying party from any liability that it may have to any indemnified party under the foregoing provisions of this Section 6 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party

similarly notified, to assume the defense of the action, with counsel satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable out-of-pocket costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (i) the employment of counsel by the indemnified party has been authorized in writing by one of the indemnifying parties in connection with the defense of such action, (ii) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (iii) the indemnified party has reasonably concluded that a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party shall not have the right to direct the defense of such action on behalf of the indemnified party), (iv) the indemnifying party does not diligently defend the action after assumption of the defense, or (v) the indemnifying party has not in fact employed counsel satisfactory to the indemnified party to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel shall be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges shall be reimbursed by the indemnifying party promptly as they are incurred. An indemnifying party shall not be liable for any settlement of any action or claim effected without its written consent (which consent will not be unreasonably withheld or delayed). No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 6 (whether or not any indemnified party is a party thereto), unless (x) such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising or that may arise out of such claim, action or proceeding and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party, and (y) the indemnifying party confirms in writing its indemnification obligations hereunder with respect to such settlement, compromise or judgment. Notwithstanding the foregoing, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a) effected without its written consent if (A) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (B) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(d) *Contribution.* In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this

Section 6 is applicable in accordance with its terms but for any reason is held to be unavailable, the Company and the Underwriters shall contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than the Underwriters, such as persons who control the Company within the meaning of the Act, officers of the Company who signed the Registration Statement and directors of the Company, who may also be liable for contribution), to which the Company and the Underwriter may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Securities pursuant to this Agreement. The relative benefits received by the Company and the Underwriters shall be deemed to be in the same proportion as (x) the total proceeds from the Offering (net of underwriting discount and commissions but before deducting expenses) received by the Company bears to (y) the underwriting discount and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and the Underwriters, on the other, with respect to the statements or omissions which resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Section 6(d) were to be determined by pro rata allocation or by any other method of allocation (even if the Underwriters were treated as one entity for such purpose) which does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense or damage, or action in respect thereof, referred to above in this Section 6(d) shall be deemed to include, for purpose of this Section 6(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 6(d), no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions received by it. No person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 6(d), any person who controls a party to this Agreement within the meaning of the Act will have the same rights to contribution as that party, and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, and each director, officer, employee, counsel or agent of an Underwriter will have the same rights to contribution as such Underwriter, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 6(d), will notify any such party or parties from whom contribution may be sought, but the omission so to notify will not relieve the party or parties from whom contribution may be sought from any other obligation it or they may

have under this Section 6(d). The obligations of the Underwriters to contribute pursuant to this Section 6(d) are several in proportion to the respective number of Securities to be purchased by each of the Underwriters hereunder and not joint. No party will be liable for contribution with respect to any action or claim settled without its written consent (which consent will not be unreasonably withheld).

(e) *Survival.* The indemnity and contribution agreements contained in this Section 6 and the representations and warranties of the Company contained in this Agreement shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or any controlling Person thereof, (ii) acceptance of any of the Securities and payment therefor or (iii) any termination of this Agreement.

7. Termination. The obligations of the Underwriters under this Agreement may be terminated at any time prior to the Closing Date, by notice to the Company from the Representative, without liability on the part of the Underwriters to the Company, if, prior to delivery and payment for the Units to be delivered in the form of the Shares together with the Warrants, in the sole judgment of the Representative, any of the following shall occur:

(a) trading or quotation in any of the equity securities of the Company shall have been suspended or limited by the Commission, the NYSE MKT or by an exchange or otherwise;

(b) trading in securities generally on the New York Stock Exchange, the NYSE MKT, the NASDAQ Capital Market, the NASDAQ Global Market, the NASDAQ Global Select Market shall have been suspended or limited or minimum or maximum prices shall have been generally established on such exchange, or additional material governmental restrictions, not in force on the date of this Agreement, shall have been imposed upon trading in securities generally by such exchange or by order of the Commission or any court or other governmental authority;

(c) a general banking moratorium shall have been declared by any of U.S. federal, New York authorities;

(d) the United States shall have become engaged in new hostilities, there shall have been an escalation in hostilities involving the United States or there shall have been a declaration of a national emergency or war by the United States or there shall have occurred such a material adverse change in general economic, political or financial conditions, including, without limitation, as a result of terrorist activities after the date hereof (or the effect of international conditions on the financial markets in the United States shall be such), or any other calamity or crisis shall have occurred, the effect of any of which is such as to make it impracticable or inadvisable to market the Securities on the terms and in the manner contemplated by the Prospectus;

(e) the Company shall have sustained a loss material or substantial to the Company by reason of flood, fire, accident, hurricane, earthquake, theft, sabotage, or other calamity or malicious act, whether or not such loss shall have been insured, the effect of any of which is such as to make it impracticable or inadvisable to market the Securities on the terms and in the manner contemplated by the Prospectus; or

(f) there shall have been a Material Adverse Change.

8. Underwriter Default.

(a) If any Underwriter or Underwriters shall default in its or their obligation to purchase the Units hereunder, and if the Securities with respect to which such default relates (the “Default Securities”) do not (after giving effect to arrangements, if any, made by the Representative pursuant to subsection (b) below) exceed in the aggregate 10% of the number of Units, each non-defaulting Underwriter, acting severally and not jointly, agrees to purchase from the Company that number of Default Securities that bears the same proportion to the total number of Default Securities then being purchased as the number of Shares and Warrants set forth opposite the name of such Underwriter on Schedule A hereto bears to the aggregate number of Shares and Warrants set forth opposite the names of the non-defaulting Underwriters; subject, however, to such adjustments to eliminate fractional shares as the Representative in its discretion shall make.

(b) In the event that the aggregate number of Default Securities exceeds 10% of the number of Units, the Representatives may in their discretion arrange for themselves or for another party or parties (including any non-defaulting Underwriter or Underwriters who so agree) to purchase the Default Securities on the terms contained herein. In the event that within five (5) calendar days after such a default the Representative does not arrange for the purchase of the Default Securities as provided in this Section 8, this Agreement shall thereupon terminate, without liability on the part of the Company with respect thereto (except in each case as provided in Sections 4(k), 6 and 8) or the Underwriters, but nothing in this Agreement shall relieve a defaulting Underwriter or Underwriters of its or their liability, if any, to the other Underwriters and the Company for damages occasioned by its or their default hereunder.

(c) In the event that any Default Securities are to be purchased by the non-defaulting Underwriters, or are to be purchased by another party or parties as aforesaid, the Representatives or the Company shall have the right to postpone the Closing Date for a period, not exceeding five (5) Business Days, in order to effect whatever changes may thereby be necessary in the Registration Statement or the Prospectus or in any other documents and arrangements, and the Company agrees to file promptly any amendment or supplement to the Registration Statement or the Prospectus which, in the reasonable opinion of Underwriters’ Counsel, may be necessary or advisable. The term “Underwriter” as used in this Agreement shall include any party substituted under this Section 8 with like effect as if it had originally been a party to this Agreement with respect to such Units.

9. Miscellaneous.

(a) *Notices.* Notice given pursuant to any of the provisions of this Agreement shall be in writing and, unless otherwise specified, shall be mailed, hand delivered or telecopied (a) if to the Company, at the office of the Company, 23622 Calabasas Road, Suite 300, Calabasas, California 91302, telecopy number: (818) 224-5287, Attention: President and Chief Executive Officer or (b) if to the Representative or any Underwriter, to Maxim Group LLC, 305 Lexington Avenue, New York, New York 100174, Attention: Legal Department, telecopy number: (212)

895-3555. Any such notice shall be effective only upon receipt. Any notice under Section 6 hereof may be made by telecopy or telephone, but if so made shall be subsequently confirmed in writing.

(b) *No Third Party Beneficiaries.* This Agreement has been and is made solely for the benefit of the Underwriters, the Company and, with respect to Section 6, the controlling persons, directors, officers, employees, counsel and agents referred to in Section 6 hereof, and their respective successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. The term “successors and assigns” as used in this Agreement shall not include a purchaser of Securities from any Underwriter in his, her or its capacity as such a purchaser, as such purchaser of Securities from such Underwriter.

(c) *Survival of Representations and Warranties.* All representations, warranties and agreements of the Company contained herein or in certificates or other instruments delivered pursuant hereto shall remain operative and in full force and effect regardless of any investigation made by or on behalf of the Underwriters or any of their controlling persons and shall survive delivery of and payment for the Securities hereunder.

(d) *Disclaimer of Fiduciary Relationship .* The Company acknowledges and agrees that (i) the purchase and sale of the Securities pursuant to this Agreement, including the determination of the public offering price of the Securities and any related discounts and commissions, is an arm’s-length commercial transaction between the Company, on the one hand, and the Underwriters, on the other hand, (ii) in connection with the offering contemplated by this Agreement and the process leading to such transaction, the Underwriters are and have been acting pursuant to a contractual relationship created solely by this Agreement and are not agents or fiduciaries of the Company or its securityholders, creditors, employees or any other party, (iii) no Underwriter has assumed nor will it assume any advisory or fiduciary responsibility in favor of the Company with respect to the offering of the Securities contemplated by this Agreement or the process leading thereto (irrespective of whether such Underwriter or its affiliates has advised or is currently advising the Company on other matters) and each such Underwriter has no obligation to the Company with respect to the offering of the Securities contemplated by this Agreement except the obligations expressly set forth in this Agreement, (iv) the Underwriters and their affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (v) no Underwriter has provided any legal, accounting, regulatory or tax advice with respect to the offering contemplated by this Agreement and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

(e) *Governing Law.* THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO AGREEMENTS MADE AND TO BE PERFORMED ENTIRELY WITHIN SUCH STATE.

(f) *Submission to Jurisdiction .* The Company irrevocably submits to the non-exclusive jurisdiction of any New York State or United States federal court sitting in The City of New York, Borough of Manhattan, over any suit, action or proceeding arising out of or relating to this Agreement, the Disclosure Package, the Prospectus, the Registration Statement, or the offering of the Securities. The Company irrevocably waives, to the fullest extent permitted by law, any

objection which it may now or hereafter have to the laying of venue of any such suit, action or proceeding brought in such a court and any claim that any such suit, action or proceeding brought in such a court has been brought in an inconvenient forum. To the extent that the Company has or hereafter may acquire any immunity (on the grounds of sovereignty or otherwise) from the jurisdiction of any court or from any legal process with respect to itself or its property, the Company irrevocably waives, to the fullest extent permitted by law, such immunity in respect of any such suit, action or proceeding including without limitation, any immunity pursuant to the U.S. Foreign Sovereign Immunities Act of 1976, as amended. Each of the Underwriters and the Company further agrees to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in the Supreme Court of the State of New York, New York County, or in the United States District Court for the Southern District of New York and agrees that service of process upon the Company mailed by certified mail or delivered by Federal Express via overnight delivery to the Company's address shall be deemed in every respect effective service of process upon the Company in any such suit, action or proceeding, and service of process upon an Underwriter mailed by certified mail or delivered by Federal Express via overnight delivery to the Underwriters' address shall be deemed in every respect effective service of process upon such Underwriter in any such suit, action or proceeding.

(g) *Judgment Currency*. If for the purposes of obtaining judgment in any court it is necessary to convert a sum due hereunder into any currency other than United States dollars, the parties hereto agree, to the fullest extent permitted by law, that the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Underwriters could purchase United States dollars with such other currency in The City of New York on the business day preceding that on which final judgment is given. The obligation of the Company with respect to any sum due from it to an Underwriter or any person controlling such Underwriter shall, notwithstanding any judgment in a currency other than United States dollars, not be discharged until the first business day following receipt by such Underwriter or controlling person of any sum in such other currency, and only to the extent that such Underwriter or controlling person may in accordance with normal banking procedures purchase United States dollars with such other currency. If the United States dollars so purchased are less than the sum originally due to such Underwriter or controlling person hereunder, the Company agrees as a separate obligation and notwithstanding any such judgment, to indemnify such Underwriter or controlling person against such loss. If the United States dollars so purchased are greater than the sum originally due to such Underwriter or controlling person hereunder, such Underwriter or controlling person agrees to pay to the Company an amount equal to the excess of the dollars so purchased over the sum originally due to such Underwriter or controlling person hereunder.

(h) *Counterparts*. This Agreement may be signed in two or more counterparts with the same effect as if the signatures thereto and hereto were upon the same instrument.

(i) *Survival of Provisions Upon Invalidity of Any Single Provision*. In case any provision in this Agreement shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

(j) *Waiver of Jury Trial.* The Company and each Underwriter each hereby irrevocably waive any right they may have to a trial by jury in respect of any claim based upon or arising out of this Agreement or the transactions contemplated hereby.

(k) *Titles and Subtitles.* The titles of the sections and subsections of this Agreement are for convenience and reference only and are not to be considered in construing this Agreement.

(l) *Entire Agreement.* This Agreement embodies the entire agreement and understanding between the parties hereto and supersedes all prior agreements and understandings relating to the subject matter hereof. This Agreement may not be amended or otherwise modified or any provision hereof waived except by an instrument in writing signed by the parties hereto.

[Signature page follows]

If the foregoing correctly sets forth your understanding, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement among us .

Very truly yours,

IMMUNOCELLULAR THERAPEUTICS, LTD.

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

Accepted by the Representatives, acting for themselves and as Representatives of the Underwriters named on Schedule A hereto, as of the date first written above:

MAXIM GROUP LLC

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

#### SCHEDULE A

Name of Underwriter	Number of Units Being Purchased
Maxim Group LLC	




## ISSUER FREE WRITING PROSPECTUSES:

[ ]

Schedule II

1. The public offering price per share of Series B Preferred Stock shall be \$[ ], per Series 1 Warrant shall be \$[ ], per Series 2 Warrant shall be \$[ ] and per Series 3 Warrant shall be \$[ ], for an aggregate purchase price of \$[ ] per Unit.
2. The Company is selling 5,000 Units.

EXHIBIT A

\_\_\_\_\_, 2017

Maxim Group LLC  
 405 Lexington Avenue  
 New York, NY 10174

**Re: Public Offering of ImmunoCellular Therapeutics, Ltd.**

Ladies and Gentlemen:

The undersigned, a holder of common stock, par value \$0.0001 (“**Common Stock**”), or rights to acquire Common Stock, of ImmunoCellular Therapeutics, Ltd. (the “**Company**”), understands that you are the representative (the “**Representative**”) of the several underwriters (collectively, the “**Underwriters**”) named or to be named in the final form of **Schedule A** to the underwriting agreement (the “**Underwriting Agreement**”) to be entered into among the Underwriters and the Company, providing for the public offering (the “**Public Offering**”) of Units consisting of (i) one share of Series B Preferred Stock (“**Preferred Stock**”), (ii) 0.6 of a Series 1 Warrant to purchase Preferred Stock, (iii) 0.6 of a Series 2 Warrant to purchase Preferred Stock, and (iv) 0.6 of a Series 3 Warrant to purchase Preferred Stock (collectively, the “**Securities**”) pursuant to a registration statement filed or to be filed with the U.S. Securities and Exchange Commission (the “**SEC**”). Capitalized terms used herein and not otherwise defined shall have the meanings set forth for them in the Underwriting Agreement.

In consideration of the Underwriters’ agreement to enter into the Underwriting Agreement and to proceed with the Public Offering of the Securities, and for other good and valuable consideration, receipt of which is hereby acknowledged, the undersigned hereby agrees, for the benefit of the Company, the Representative and the other Underwriters that, without the prior written consent of the Representative, the undersigned will not, during the period specified in the following paragraph (the “**Lock-Up Period**”), directly or indirectly, unless otherwise provided herein, (a) offer, sell, agree to offer or sell, solicit offers to purchase, grant any call option or purchase any put option with respect to, pledge, encumber, assign, borrow or otherwise dispose of or transfer (each a “**Transfer**”) any Relevant Security (as defined below) or otherwise publicly disclose the intention to do so, or (b) establish or increase any “put equivalent position” or liquidate or decrease any “call equivalent position” (in each case within the meaning of Section 16 of the Exchange Act and the rules and regulations thereunder) with respect to any Relevant Security or otherwise enter into any swap, derivative or other transaction or arrangement that Transfers to another, in whole or in part, any economic consequence of ownership of a Relevant Security, whether or not such transaction is to be settled by the delivery of Relevant Securities, other securities, cash or other consideration, or otherwise publicly disclose the intention to do so. As used herein, the term “**Relevant Security**” means any share of Common Stock, warrant to purchase Common Stock or any other security of the Company or any other entity that is convertible into, or exercisable or exchangeable for, Common Stock or any other equity security of the Company, in each case owned beneficially or otherwise by the undersigned on the date of the final prospectus used in connection with the Public Offering of the Securities (the “**Effective Date**”).

The Lock-Up Period will commence on the date of this Lock-up Agreement and continue and include the date that is ninety (90) days after the Closing Date.

In addition, the undersigned further agrees that, without the prior written consent of the Representative, during the Lock-Up Period the undersigned will not: (i) file or participate in the filing with the SEC of any registration statement or circulate or participate in the circulation of any preliminary or final prospectus or other disclosure document, in each case with respect to any proposed offering or sale of a Relevant Security, or (ii) exercise any rights the undersigned may have to require registration with the SEC of any proposed offering or sale of a Relevant Security.

In addition, if: (i) the Company issues an earnings release or material news or a material event relating to the Company occurs during the last seventeen (17) days of the Lock-Up Period, or (ii) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results during the sixteen (16)-day period beginning on the last day of the Lock-Up Period, then the restrictions imposed by this Lock-Up Agreement shall continue to apply until the expiration of the eighteen (18)-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event (the “ **Extension Period** ”). However, for purposes of clarity, only one Extension Period may occur.

In furtherance of the undersigned’s obligations hereunder, the undersigned hereby authorizes the Company during the Lock-Up Period to cause any transfer agent for the Relevant Securities to decline to transfer, and to note stop transfer restrictions on the stock register and other records relating to, Relevant Securities for which the undersigned is the record owner and the transfer of which would be a violation of this Lock-Up Agreement and, in the case of Relevant Securities for which the undersigned is the beneficial but not the record owner, agrees that during the Lock-Up Period it will cause the record owner to cause the relevant transfer agent to decline to transfer, and to note stop transfer restrictions on the stock register and other records relating to, such Relevant Securities to the extent such transfer would be a violation of this Lock-Up Agreement.

Notwithstanding the foregoing, the undersigned may transfer the undersigned’s Relevant Securities:

- (i) as a *bona fide* gift or gifts or for *bona fide* estate planning purposes,
- (ii) to any trust for the direct or indirect benefit of the undersigned or a member of members of the immediate family of the undersigned,
- (iii) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity (1) to another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate (as defined in Rule 405 under the Securities Act of 1933) of the undersigned, (2) to limited partners, limited liability company members or stockholders of the undersigned, or (3) in connection with a sale, merger or transfer of all or substantially all of the assets of the undersigned or any other change of control of the undersigned, not undertaken for the purpose of avoiding the restrictions imposed by this Lock-Up Agreement,
- (iv) if the undersigned is a trust, to the beneficiary of such trust,
- (v) by testate or intestate succession,
- (vi) by operation of law, such as pursuant to a qualified domestic order or in connection with a divorce settlement,
- (vii) in connection with any sale of any of the Company’s securities acquired in open market transactions after the Effective Date,
- (viii) pursuant to the Underwriting Agreement, and
- (ix) pursuant to a trading plan established prior to March 23, 2017 pursuant to Rule 10b5-1 of the Exchange Act.

*provided*, in the case of clauses (i)-(vi), that (A) such transfer shall not involve a disposition for value, (B) the transferee agrees in writing with the Underwriters and the Company to be bound by the terms of this Lock-Up Agreement, and (C) such transfer would not require any filing under Section 16(a) of the Exchange Act and no such filing is voluntarily made during the Lock-Up Period.

Nothing in this Lock-Up Agreement shall preclude the establishment of a new trading plan pursuant to Rule 10b5-1 of the Exchange Act; provided, that (A) no public report or filing under Section 16(a) of the Exchange Act shall be required during the Lock-Up Period, (B) the undersigned does not otherwise voluntarily effect any public filing or report regarding the establishment of such plan during the Lock-Up Period, and (C) no sales are made during the Lock-Up Period pursuant to such plan.

Additionally, upon the prior written consent of the Representative, such consent not to be unreasonably withheld, the undersigned may transfer the undersigned’s Relevant Securities to the Company: (i) upon a vesting event of the Company’s securities, or (ii) pursuant to arrangements under which the Company has the option to repurchase such shares or a right of first refusal with respect to transfers of such shares or upon the exercise or conversion of options or warrants to purchase the Company’s securities, in each case, on a “cashless” or “net exercise” basis to cover tax withholding obligations of the undersigned in connection with such vesting or exercise; provided, that, any filing under Section 16(a) of the Exchange Act made during the Lock-Up Period shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described above.

For purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Lock-Up Agreement and that this Lock-Up Agreement has been duly authorized (if the undersigned is not a natural person) and constitutes the legal, valid and binding obligation of the undersigned, enforceable in accordance with its terms. Upon request, the undersigned will execute any additional documents necessary in connection with the enforcement hereof. Any obligations of the undersigned shall be binding upon the successors and assigns of the undersigned from the date of this Lock-Up Agreement.

If (i) the Underwriting Agreement does not become effective on or before July 31, 2017 (provided that the Company may by written notice to the undersigned on or prior to July 31, 2017 extend such date for a period of up to an additional 90 days), (ii) the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Securities to be sold thereunder, (iii) the registration statement filed with the SEC with respect to the Public Offering is withdrawn, or (iv) the Company notifies the Representative that it does not intend to proceed with the Public Offering, the undersigned shall be released from all obligations under this Lock-Up Agreement.

The undersigned, whether or not participating in the Public Offering, understands that the Underwriters are entering into the Underwriting Agreement and proceeding with the Public Offering in reliance upon this Lock-Up Agreement.

*[Signature Follows]*

This Lock-Up Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to the conflict of laws principles thereof. Delivery of a signed copy of this Lock-Up Agreement by facsimile or e-mail/pdf transmission shall be effective as the delivery of the original hereof.

Very truly yours,

Signature: \_\_\_\_\_

Name (printed):

Title (if applicable):

Entity (if applicable):

EXHIBIT B

Form of Press Release

[ ]  
[Date]

[ ] (the "Company") announced today that Maxim Group LLC, the lead book-running manager in the Company's recent public sale of Units consisting of (i) one share of Series B 8.0% Mandatorily Convertible Preferred Stock, or "Preferred Stock", (ii) 0.6 of a Series 1 Warrant to purchase one share of Preferred Stock, (iii) 0.6 of a Series 2 Warrant to purchase one share of Preferred Stock, and (iv) 0.6 of a Series 3 Warrant to purchase one share of Preferred Stock, is [waiving][releasing] a lock-up restriction with respect to [ ] of the Company's shares of Common Stock held by [certain officers or directors][an officer or director] of the Company. The [waiver][release] will take effect on [ ], and the shares of Common Stock may be sold on or after such date.

**This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.**

**IMMUNOCELLULAR THERAPEUTICS, LTD.**  
**CERTIFICATE OF DESIGNATION OF PREFERENCES,**  
**RIGHTS AND LIMITATIONS**  
**OF**  
**SERIES B 8.0% MANDATORILY CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE  
DELAWARE GENERAL CORPORATION LAW

**IMMUNOCELLULAR THERAPEUTICS, LTD.**, a Delaware corporation (the “Corporation”), in accordance with the provisions of Section 103 of the Delaware General Corporation Law (the “DGCL”) does hereby certify that, in accordance with Sections 141(c) and 151 of the DGCL, the following resolution was duly adopted by the Board of Directors of the Corporation as of [\_\_\_\_], 2017:

RESOLVED, that the Board of Directors of the Corporation, pursuant to authority expressly vesting in it by the provisions of the Amended and Restated Certificate of Incorporation of the Corporation, as amended (the “Certificate of Incorporation”), hereby authorizes the issuance of a series of Preferred Stock designated as the Series B 8.0% Mandatorily Convertible Preferred Stock, par value \$0.001 per share, of the Corporation and hereby fixes the designation, number of shares, powers, rights, qualifications, limitations and restrictions thereof (in addition to any provisions set forth in the Certificate of Incorporation which are applicable to the Preferred Stock of all classes and series) as follows:

**TERMS OF SERIES B 8.0% MANDATORILY CONVERTIBLE PREFERRED STOCK**

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

“Adjustment Right” means any right granted with respect to any securities issued in connection with, or with respect to, any issuance or sale (or deemed issuance or sale in accordance with Section 7 hereof) of shares of Common Stock (other than rights of the type described in Section 7(d) and 7(e) hereof) that could result in a decrease in the net consideration received by the Corporation in connection with, or with respect to, such securities (including, without limitation, any cash settlement rights, cash adjustment or other similar rights).

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

“Alternate Consideration” shall have the meaning set forth in Section 7(e).

“Attribution Parties” shall have the meaning set forth in Section 6(d).

“Bankruptcy Event” means any of the following events: (a) the Corporation or any Significant Subsidiary (as such term is defined in Rule 1-02(w) of Regulation S-X) thereof commences a case or other proceeding under any bankruptcy, reorganization, arrangement, adjustment of debt, relief of debtors, dissolution, insolvency or liquidation or similar law of any jurisdiction relating to the Corporation or any Significant Subsidiary thereof, (b) there is commenced against the Corporation or any Significant Subsidiary thereof any such case or proceeding that is not dismissed within 60 days after commencement, (c) the Corporation or any Significant Subsidiary thereof is adjudicated insolvent or bankrupt or any order of relief or other order approving any such case or proceeding is entered, (d) the Corporation or any Significant Subsidiary thereof suffers any appointment of any custodian or the like for it or any substantial part of its property that is not discharged or stayed within 60 calendar days after such appointment, (e) the Corporation or any Significant Subsidiary thereof makes a general assignment for the benefit of creditors, (f) the Corporation or any Significant Subsidiary thereof calls a meeting of its creditors with a view to arranging a composition, adjustment or restructuring of its debts, or (g) the Corporation or any Significant Subsidiary thereof, by any act or failure to act, expressly indicates its consent to, approval of or acquiescence in any of the foregoing or takes any corporate or other action for the purpose of effecting any of the foregoing.

“Base Set Price” shall have the meaning set forth in Section 7(b).

“Beneficial Ownership Limitation” shall have the meaning set forth in Section 6(d).

“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.

“Buy-In” shall have the meaning set forth in Section 6(c)(iv).

“Change of Control Transaction” means the occurrence after the date hereof of any of (a) an acquisition after the date hereof by an individual or legal entity or “group” (as described in Rule 13d-5(b)(1) promulgated under the Exchange Act) of effective control (whether through legal or beneficial ownership of capital stock of the Corporation, by contract or otherwise) of in excess of 33% of the voting securities of the Corporation (other than by means of conversion or exercise of Preferred Stock and the Securities issued together with the Preferred Stock), (b) the Corporation merges into or consolidates with any other Person, or any Person merges into or consolidates with the Corporation and, after giving effect to such transaction, the stockholders of the Corporation immediately prior to such transaction own less than 66% of the aggregate voting power of the Corporation or the successor entity of such transaction, (c) the Corporation sells or transfers all or substantially all of its assets to another Person and the stockholders of the Corporation immediately prior to such transaction own less than 66% of the aggregate voting power of the acquiring entity immediately after the transaction, (d) a replacement at one time or within a one year period of more than one-half of the members of the Board of Directors which is not approved by a majority of those individuals who are members of the Board of Directors on the Original Issue Date (or by those individuals who are serving as members of the Board of Directors

on any date whose nomination to the Board of Directors was approved by a majority of the members of the Board of Directors who are members on the Original Issue Date), or (e) the execution by the Corporation of an agreement to which the Corporation is a party or by which it is bound, providing for any of the events set forth in clauses (a) through (d) above.

“Closing” means the closing of the purchase and sale of the Securities pursuant to Section 2(a) of the Underwriting Agreement.

“Closing Date” means the Trading Day on which all of the Transaction Documents have been executed and delivered by the applicable parties thereto and all conditions precedent to (i) each underwriter’s obligations to pay the purchase price under the Underwriting Agreement and (ii) the Corporation’s obligations to deliver the Securities have been satisfied or waived.

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

“Common Stock” means the Corporation’s common stock, par value \$0.0001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

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

“Conversion Amount” means the sum of the Stated Value at issue.

“Conversion Date” shall have the meaning set forth in Section 6(a).

“Conversion Price” shall have the meaning set forth in Section 6(b).

“Conversion Shares” means, collectively, the shares of Common Stock issuable upon conversion of the shares of Preferred Stock in accordance with the terms hereof.

“Dilutive Issuance” shall have the meaning set forth in Section 7(b).

“Dilutive Issuance Notice” shall have the meaning set forth in Section 7(b).

“Distribution” shall have the meaning set forth in Section 7(d).

“Dividend Conversion Rate” means the lesser of (a) the Conversion Price or (b) 87.5% of the lowest VWAP for the 10 consecutive Trading Days ending on the Trading Day that is immediately prior to the date the applicable Dividend Conversion Shares are issued and delivered if such delivery is after the Dividend Payment Date.

“Dividend Conversion Shares” shall have the meaning set forth in Section 3(a).

“ Dividend Notice Period ” shall have the meaning set forth in Section 3(a).

“ Dividend Payment Date ” shall have the meaning set forth in Section 3(a).

“ Dividend Share Amount ” shall have the meaning set forth in Section 3(a).

“ Equity Conditions ” means, during the period in question, (a) the Corporation shall have duly honored all conversions scheduled to occur or occurring by virtue of one or more Notices of Conversion of the applicable Holder on or prior to the dates so requested or required, if any, (b) the Corporation shall have paid all liquidated damages and other amounts owing to the applicable Holder in respect of the Preferred Stock, (c)(i) there is an effective registration statement pursuant to which either (A) the Corporation may issue Conversion Shares or (B) the Holders are permitted to utilize the prospectus thereunder to resell all of the shares of Common Stock issuable pursuant to the Transaction Documents (and the Corporation believes, in good faith, that such effectiveness will continue uninterrupted for the foreseeable future) or (ii) all of the Conversion Shares issuable pursuant to the Transaction Documents (and shares issuable in lieu of cash payments of dividends) may be resold pursuant to Rule 144 without volume or manner-of-sale restrictions or current public information requirements as determined by the counsel to the Corporation as set forth in a written opinion letter to such effect, addressed and acceptable to the Transfer Agent and the affected Holders or (iii) all of the Conversion Shares may be issued to the Holder pursuant to Section 3(a)(9) of the Securities Act and immediately resold without restriction, (d) the Common Stock is trading on a Trading Market and all of the shares of Common Stock issuable pursuant to the Transaction Documents are listed or quoted for trading on such Trading Market (and the Corporation believes, in good faith, that trading of the Common Stock on a Trading Market will continue uninterrupted for the foreseeable future), (e) there is a sufficient number of authorized, but unissued and otherwise unreserved, shares of Common Stock for the issuance of all of the shares then issuable pursuant to the Transaction Documents, (f) the issuance of the shares in question to the applicable Holder would not violate the limitations set forth in Section 6(d) and Section 6(e) herein, (h) there has been no public announcement of a pending or proposed Fundamental Transaction or Change of Control Transaction that has not been consummated, (i) the applicable Holder is not in possession of any information provided by the Corporation, any of its Subsidiaries, or any of their officers, directors, employees, agents or Affiliates, that constitutes, or may constitute, material non-public information, and (j) for each Trading Day in a period of 20 consecutive Trading Days prior to the applicable date in question, the daily trading volume for the Common Stock on the principal Trading Market exceeds (1) 20,000 shares per Trading Day (subject to adjustment for forward and reverse stock splits and the like).

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

“ Exempt Issuance ” means the issuance of (a) shares of Common Stock or options to employees, officers, consultants or directors of the Corporation pursuant to any stock or option plan duly adopted by a majority of the non-employee members of the Board of Directors of the Corporation or a majority of the members of a committee of non-employee



directors established for such purpose for services rendered to the Corporation, *provided, however*, issuances to consultants shall not exceed 1,000,000 shares (to be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction), in the aggregate, of Common Stock or Common Stock equivalents in any twelve month period (b) any shares of Common Stock or Common Stock Equivalents issued or issuable pursuant to that certain Controlled Equity Offering Sales Agreement, dated April 18, 2013, by and between the Corporation and Cantor Fitzgerald & Co.; *provided*, that such agreement is not amended, modified or revised after the date hereof, (c) securities to be sold pursuant to and issuable upon the exercise or exchange of or conversion of any securities issued pursuant to the Transaction Documents and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of the Underwriting Agreement, provided that such securities have not been amended since the date of the Underwriting Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of any such securities, and (d) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Corporation, provided that any such issuance shall only be to a Person (or to the equityholders of a Person) which is, itself or through its subsidiaries, an operating company or an asset in a business synergistic with the business of the Corporation and shall provide to the Corporation additional benefits in addition to the investment of funds, but shall not include a transaction in which the Corporation is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

“Fundamental Transaction” shall have the meaning set forth in Section 7(e).

“GAAP” means United States generally accepted accounting principles.

“Holder” shall have the meaning given such term in Section 2.

“Junior Securities” means the Common Stock and all other Common Stock Equivalents of the Corporation other than those securities which are explicitly senior or pari passu to the Preferred Stock in dividend rights or liquidation preference.

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

“Liquidation” shall have the meaning set forth in Section 5.

“Mandatory Conversion Date” shall have the meaning set forth in Section 6(b).

“New York Courts” shall have the meaning set forth in Section 10(d).

“Notice of Conversion” shall have the meaning set forth in Section 6(a).

“Original Issue Date” means the date of the first issuance of any shares of the Preferred Stock regardless of the number of transfers of any particular shares of Preferred

Stock and regardless of the number of certificates which may be issued to evidence such Preferred Stock.

“ 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 ” shall have the meaning set forth in Section 2.

“ Purchase Right ” shall have the meaning set forth in Section 7(c).

“ Securities ” means the Preferred Stock, the Warrants, the Warrant Shares and the Underlying Shares.

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

“ Series 1 Warrants ” means, the Series 1 warrants to purchase Preferred Stock, delivered to the Holder at the Closing in accordance with Section 2(a) of the Underwriting Agreement, which warrants shall be exercisable immediately and have a term of exercise equal to three (3) months.

“ Series 2 Warrants ” means, the Series 2 warrants to purchase Preferred Stock, delivered to the Holder at the Closing in accordance with Section 2(a) of the Underwriting Agreement, which warrants shall be exercisable immediately and have a term of exercise equal to six (6) months.

“ Series 3 Warrants ” means, the Series 2 warrants to purchase Preferred Stock, delivered to the Holder at the Closing in accordance with Section 2(a) of the Underwriting Agreement, which warrants shall be exercisable immediately and have a term of exercise equal to twelve (12) months.

“ Set Price ” shall have the meaning set forth in Section 6(b).

“ Share Delivery Date ” shall have the meaning set forth in Section 6(c).

“ Shareholder Approval ” means such approval as may be required by the applicable rules and regulations of the NYSE MKT (or any successor entity) from the shareholders of the Corporation with respect to the transactions contemplated by the Transaction Documents, including the issuance of all of the Underlying Shares in excess of 19.99% of the issued and outstanding Common Stock on the Closing Date.

“ Stated Value ” shall have the meaning set forth in Section 2, as the same may be increased pursuant to Section 3.

“ Subsidiary ” means any subsidiary of the Corporation as set forth in Exhibit 21.1 to the Corporation’s Annual Report on Form 10-K for the year ended December 31, 2016

and shall, where applicable, also include any direct or indirect subsidiary of the Corporation formed or acquired after the date of the Company's Form 10-K for the year ended December 31, 2016.

“Successor Entity” shall have the meaning set forth in Section 7(e).

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

“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, OTC Bulletin Board, OTCQB or OTCQX (or any successors to any of the foregoing).

“Transaction Documents” means this Certificate of Designation, the Underwriting Agreement, the Warrants, the Lock-Up Agreement, all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated pursuant to the Underwriting Agreement.

“Transfer Agent” means Computershare Trust Company, N.A. , the current transfer agent of the Corporation with a mailing address of 250 Royall Street, Canton, MA 02021, and any successor transfer agent of the Corporation.

“Underlying Shares” means the shares of Common Stock issued and issuable upon conversion of the Preferred Stock, upon conversion of the Preferred Stock issuable upon exercise of the Warrants and issued and issuable in lieu of the cash payment of dividends on the Preferred Stock in accordance with the terms of this Certificate of Designation.

“Underwriting Agreement” means the Underwriting Agreement, dated as of [ ], 2017, between the Corporation and Maxim Group LLC as representative of the several underwriters named on Schedule I thereto, as amended, modified or supplemented from time to time in accordance with its terms.

“Variable Rate Transaction” shall have the meaning ascribed to such term in Section 5(t)(ii) of the Underwriting Agreement.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are

then reported in the “Pink Sheets” published by OTC Markets, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Securities then outstanding and reasonably acceptable to the Corporation, the fees and expenses of which shall be paid by the Corporation.

“Warrants” means, collectively, the Series 1 Warrants, the Series 2 Warrants and the Series 3 Warrants.

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

Section 2. Designation, Amount and Par Value. The series of preferred stock shall be designated as its Series B 8.0% Mandatorily Convertible Preferred Stock (the “Preferred Stock”) and the number of shares so designated shall be up to 15,000 (which shall not be subject to increase without the written consent of all of the holders of the Preferred Stock (each, a “Holder” and collectively, the “Holders”). Each share of Preferred Stock shall have a par value of \$0.0001 per share and a stated value equal to \$1,080 per share, subject to increase set forth in Section 3 below (the “Stated Value”).

Section 3. Dividends.

a) Dividends in Cash or in Kind. Holders shall be entitled to receive, and the Corporation shall pay, cumulative dividends at the rate per share (as a percentage of the Stated Value per share) of 8.0% per annum, payable quarterly on January 1, April 1, July 1 and October 1, beginning on the first such date after the Original Issue Date and on each Conversion Date to the converting Holder (with respect only to Preferred Stock being converted) (each such date, a “Dividend Payment Date”) (if any Dividend Payment Date is not a Trading Day, the applicable payment shall be due on the next succeeding Trading Day) in cash, or at the Corporation’s option, in duly authorized, validly issued, fully paid and non-assessable shares of Common Stock as set forth in this Section 3(a), or a combination thereof (the dollar amount to be paid in shares of Common Stock, the “Dividend Share Amount”). The form of dividend payments to each Holder shall be determined in the following order of priority: (i) if funds are legally available for the payment of dividends and the Equity Conditions have not been met during the 20 consecutive Trading Days immediately prior to the applicable Dividend Payment Date (the “Dividend Notice Period”), in cash only, (ii) if funds are legally available for the payment of dividends and the Equity Conditions have been met during the Dividend Notice Period, at the sole election of the Corporation, in cash or shares of Common Stock which shall be valued at the Dividend Conversion Rate, (iii) if funds are not legally available for the payment of dividends and the Equity Conditions have been met during the Dividend Notice Period, in shares of Common Stock which shall be valued at the Dividend Conversion Rate, (iv) if funds are not legally available for the payment of dividends and the Equity Condition relating to an effective Conversion Shares Registration Statement has been waived by such Holder, as to such Holder only, in unregistered shares of Common Stock which shall be valued at the Dividend Conversion Rate, and (v) if funds

are not legally available for the payment of dividends and the Equity Conditions have not been met during the Dividend Notice Period, then, at the election of such Holder, such dividends shall accrete as of each Dividend Payment Date to, and increase, the outstanding Stated Value and shall thereafter be considered fully paid and no longer accrued and unpaid dividends. In addition, as a condition to paying dividends in shares of Common Stock, as to such Dividend Payment Date, prior to such Dividend Notice Period (but not more than five (5) Trading Days prior to the commencement of such Dividend Notice Period), the Corporation shall have delivered to each Holder's account with the Depository Trust Company a number of shares of Common Stock to be applied against such Dividend Share Amount equal to the quotient of (x) the applicable Dividend Share Amount divided by (y) the Dividend Conversion Rate, assuming for such purposes that the Dividend Payment Date is the Trading Day immediately prior to the commencement of the Dividend Notice Period (the "Dividend Conversion Shares"). The Holders shall have the same rights and remedies with respect to the delivery of any such shares as if such shares were being issued pursuant to Section 6.

b) Corporation's Ability to Pay Dividends in Cash or Kind. On the Closing Date, the Corporation shall have notified the Holders whether or not it may legally pay cash dividends as of the Closing Date. The Corporation shall promptly notify the Holders at any time the Corporation shall become able or unable, as the case may be, to legally pay cash dividends. If at any time the Corporation has the right to pay dividends in cash or shares of Common Stock, the Corporation must provide the Holders with at least 20 Trading Days' notice of its election to pay a regularly scheduled dividend in shares of Common Stock (the Corporation may indicate in such notice that the election contained in such notice shall continue for later periods until revised by a subsequent notice). If at any time the Corporation delivers a notice to the Holders of its election to pay the dividends in shares of Common Stock, the Corporation shall timely file a prospectus supplement pursuant to Rule 424 disclosing such election. The aggregate number of shares of Common Stock otherwise issuable to a Holder on a Dividend Payment Date shall be reduced by the number of shares of Common Stock previously issued to such Holder in connection with such Dividend Payment Date. If any Dividend Conversion Shares are issued to a Holder in connection with a Dividend Payment Date and are not applied against a Dividend Share Amount, then such Holder shall promptly return such excess shares to the Corporation.

c) Dividend Calculations. Dividends on the Preferred Stock shall be calculated on the basis of a 360-day year, consisting of twelve 30 calendar day periods, and shall accrue daily commencing on the Original Issue Date, and shall be deemed to accrue from such date whether or not earned or declared and whether or not there are profits, surplus or other funds of the Corporation legally available for the payment of dividends. Payment of dividends in shares of Common Stock shall otherwise occur pursuant to Section 6(c)(i) herein and, solely for purposes of the payment of dividends in shares, the Dividend Payment Date shall be deemed the Conversion Date. Dividends shall cease to accrue with respect to any Preferred Stock converted, provided that, the Corporation actually delivers the Conversion Shares within the time period required by Section 6(c)(i) herein. Except as otherwise provided herein, if at any time the Corporation pays dividends partially in cash and partially in shares,

then such payment shall be distributed ratably among the Holders based upon the number of shares of Preferred Stock held by each Holder on such Dividend Payment Date.

d) Late Fees. Any dividends, whether paid in cash or shares of Common Stock, other than with respect to dividends that accrete to, and increase, the outstanding Stated Value pursuant to Section 3(a) if funds are not legally available for the payment of dividends, that are not paid within three Trading Days following a Dividend Payment Date shall continue to accrue and shall entail a late fee, which must be paid in cash, at the rate of 18% per annum or the lesser rate permitted by applicable law which shall accrue daily from the Dividend Payment Date through and including the date of actual payment in full.

e) Other Securities. So long as any Preferred Stock shall remain outstanding, neither the Corporation nor any Subsidiary thereof shall redeem, purchase or otherwise acquire directly or indirectly any Junior Securities. So long as any Preferred Stock shall remain outstanding, neither the Corporation nor any Subsidiary thereof shall directly or indirectly pay or declare any dividend or make any distribution upon (other than a dividend or distribution described in Section 6 or dividends due and paid in the ordinary course on preferred stock of the Corporation at such times when the Corporation is in compliance with its payment and other obligations hereunder), nor shall any distribution be made in respect of, any Junior Securities as long as any dividends due on the Preferred Stock remain unpaid, nor shall any monies be set aside for or applied to the purchase or redemption (through a sinking fund or otherwise) of any Junior Securities or shares pari passu with the Preferred Stock.

f) Special Reserves. The Corporation acknowledges and agrees that the capital of the Corporation (as such term is used in Section 154 of the Delaware General Corporation Law) in respect of the Preferred Stock and any future issuances of the Corporation's capital stock shall be equal to the aggregate par value of such Preferred Stock or capital stock, as the case may be, and that, on or after the date of the Purchase Agreement, it shall not increase the capital of the Corporation with respect to any shares of the Corporation's capital stock issued and outstanding on such date. The Corporation also acknowledges and agrees that it shall not create any special reserves under Section 154 of the Delaware General Corporation Law without the prior written consent of each Holder.

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by law, the Preferred Stock shall have no voting rights. However, as long as any shares of Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of the Preferred Stock: (a) alter or change adversely the powers, preferences or rights given to the Preferred Stock or alter or amend this Certificate of Designation, (b) authorize or create any class of stock ranking as to dividends, redemption or distribution of assets upon a Liquidation (as defined in Section 5) senior to, or otherwise pari passu with, the Preferred Stock, (c) amend its certificate of incorporation or other charter documents in any manner that adversely affects any rights of the Holders, (d) increase the number of authorized shares of Preferred Stock, or (e) enter into any agreement with respect to any of the foregoing.

Section 5. Liquidation. Upon any liquidation, dissolution or winding-up of the Corporation, whether voluntary or involuntary (a “Liquidation”), the Holders shall be entitled to receive out of the assets, whether capital or surplus, of the Corporation *pari passu* with the holders of Common Stock, pro rata based on the number of shares held by each such holder, treating for this purposes all such Preferred Stock as if they had been converted into Common Stock (without regard to conversion limitations herein). A Fundamental Transaction or Change of Control Transaction shall not be deemed a Liquidation. The Corporation shall mail written notice of any such Liquidation, not less than 45 days prior to the payment date stated therein, to each Holder.

Section 6. Conversion.

a) Conversions at Option of Holder. Each share of Preferred Stock shall be convertible, at any time and from time to time from and after the Original Issue Date, at the option of the Holder thereof, into that number of shares of Common Stock (subject to the limitations set forth in Section 6(e) determined by dividing the Stated Value of such share of Preferred Stock by the Conversion Price. Holders shall effect conversions by providing the Corporation with (i) with respect to certificated shares of Preferred Stock, the form of conversion notice attached hereto as Annex A, or (ii) with respect to Preferred Stock held in electronic form through a broker, bank or other nominee, an electronic notice through the Depository Trust Company (each, a “Notice of Conversion”). Each Notice of Conversion shall specify the number of shares of Preferred Stock to be converted, the number of shares of Preferred Stock owned prior to the conversion at issue, the number of shares of Preferred Stock owned subsequent to the conversion at issue and the date on which such conversion is to be effected, which date may not be prior to the date the applicable Holder delivers by facsimile such Notice of Conversion to the Corporation or its agent appointed to administer conversion of the Preferred Stock (such date, the “Conversion Date”). If no Conversion Date is specified in a Notice of Conversion, the Conversion Date shall be the date that such Notice of Conversion to the Corporation is deemed delivered hereunder. Upon delivery of the Notice of Conversion by a Holder, such Holder shall be deemed for all corporate purposes to have become the holder of record of the Conversion Shares with respect to which the Preferred Stock has been converted, irrespective of the date such Conversion Shares are credited to the Holder’s Depository Trust Company account or the date of delivery of the certificates evidencing such Conversion Shares, as the case may be. A beneficial owner of shares of Preferred Stock held in electronic form through a broker, bank or other nominee may submit an informational Notice of Conversion to the Corporation via facsimile or email and upon the Corporation’s receipt or deemed receipt of such notice, such beneficial owner shall be deemed to have become the holder of record of the Conversion Shares for all corporate purposes. No ink-original Notice of Conversion shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Conversion form be required. The calculations and entries set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error. To effect conversions of shares of Preferred Stock, a Holder shall not be required to surrender the certificate(s) representing the shares of Preferred Stock to the Corporation unless all of the shares of Preferred Stock represented thereby are so converted, in which case such Holder shall deliver the certificate representing such shares of Preferred Stock promptly following the Conversion Date at

issue. With respect to Preferred Stock held in electronic form through a broker, bank or other nominee, if required by the Transfer Agent, Holder shall cause its broker, bank or nominee to return to the Corporation, in electronic form, the number of shares of Preferred Stock being converted. Shares of Preferred Stock converted into Common Stock or redeemed in accordance with the terms hereof shall be canceled and shall not be reissued.

b) Mandatory Conversion. Upon the date that is twelve (12) months after the Original Issue Date (the “Mandatory Conversion Date”) provided that the Equity Conditions have been met on such date and during the 30 days prior thereto, each share of Preferred Stock shall automatically be converted into that number of shares of Common Stock (subject to the limitations set forth in Section 6(e)) determined by dividing the Stated Value of such share of Preferred Stock by the Conversion Price ( provided, however, to the extent that the Holder’s obligation to convert hereunder would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be required to convert to such extent (or beneficial ownership of such shares of Common Stock as a result of such obligation to such extent) and Conversion Shares otherwise in excess of such Beneficial Ownership Limitation shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Conversion Price. The conversion price for the Preferred Stock shall equal the lesser of (i) \$[\_\_\_\_\_] , subject to adjustment herein (the “Set Price”) and (ii) 87.5% of the lowest VWAP during the ten Trading Days ending on, and including, the date that a Notice of Conversion is tendered to the Corporation or the Mandatory Conversion Date, which in the case of (ii), shall not be less than \$0.35 (the lower of (i) and (ii), the “Conversion Price”).

d) Mechanics of Conversion

i. Delivery of Conversion Shares Upon Conversion. Not later than the earlier of (i) three (3) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined below) after each Conversion Date (the “Share Delivery Date”), the Corporation shall deliver, or cause to be delivered, to the converting Holder (A) the number of Conversion Shares being acquired upon the conversion of the Preferred Stock, which Conversion Shares shall be free of restrictive legends and trading restrictions (including, if the Corporation has given continuous notice pursuant to Section 3(b) for payment of dividends in shares of Common Stock at least 20 Trading Days prior to the date on which the Notice of Conversion is delivered to the Corporation, shares of Common Stock representing the payment of accrued dividends otherwise determined pursuant to Section 3(a) but assuming that the Dividend Notice Period is the 20 Trading Days period immediately prior to the date on which the Notice of Conversion is delivered to the Corporation and excluding for such issuance the condition that the Corporation deliver the Dividend Share Amount as to such dividend payment prior to the commencement of the Dividend Notice Period), and (B) a bank check in the amount of accrued and unpaid dividends (if the Corporation has elected or is required to pay accrued



dividends in cash). The Corporation shall deliver the Conversion Shares electronically through the Depository Trust Company or another established clearing corporation performing similar functions. As used herein, “ Standard Settlement Period ” means the standard settlement period, expressed in a number of Trading Days, on the Corporation’s primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Conversion. Notwithstanding the foregoing, with respect to any Notice(s) of Conversion delivered by 12:00 p.m. (New York City time) on the Original Issue Date, the Corporation agrees to deliver the Conversion Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Original Issue Date.

ii. Failure to Deliver Conversion Shares. If, in the case of any Notice of Conversion, such Conversion Shares are not delivered to or as directed by the applicable Holder by the Share Delivery Date, the Holder shall be entitled to elect by written notice to the Corporation at any time on or before its receipt of such Conversion Shares, to rescind such Conversion, in which event the Corporation shall promptly return to the Holder any original Preferred Stock certificate delivered to the Corporation and the Holder shall promptly return to the Corporation the Conversion Shares issued to such Holder pursuant to the rescinded Notice of Conversion.

iii. Obligation Absolute; Partial Liquidated Damages. The Corporation’s obligation to issue and deliver the Conversion Shares upon conversion of Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares; provided, however, that such delivery shall not operate as a waiver by the Corporation of any such action that the Corporation may have against such Holder. In the event a Holder shall elect to convert any or all of the Stated Value of its Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or any one associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and/or enjoining conversion of all or part of the Preferred Stock of such Holder shall have been sought and obtained, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the Stated Value of Preferred Stock which is subject to the injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment. In the absence of such injunction, the Corporation shall issue Conversion Shares

and, if applicable, cash, upon a properly noticed conversion. If the Corporation fails to deliver to a Holder such Conversion Shares pursuant to Section 6(c)(i) by the Share Delivery Date applicable to such conversion, the Corporation shall pay to such Holder, in cash, as liquidated damages and not as a penalty, for each \$5,000 of Stated Value of Preferred Stock being converted, \$50 per Trading Day (increasing to \$100 per Trading Day on the third Trading Day and increasing to \$200 per Trading Day on the sixth Trading Day after such damages begin to accrue) for each Trading Day after the Share Delivery Date until such Conversion Shares are delivered or Holder rescinds such conversion. Nothing herein shall limit a Holder's right to pursue actual damages for the Corporation's failure to deliver Conversion Shares within the period specified herein and such Holder shall have the right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief. The exercise of any such rights shall not prohibit a Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law.

iv. Compensation for Buy-In on Failure to Timely Deliver Conversion Shares Upon Conversion. In addition to any other rights available to the Holder, if the Corporation fails for any reason to deliver to a Holder the applicable Conversion Shares by the Share Delivery Date pursuant to Section 6(c)(i), and if after such Share Delivery Date such Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "Buy-In"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount, if any, by which (x) such Holder's total purchase price (including any brokerage commissions) for the Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of such Holder, either reissue (if surrendered) the shares of Preferred Stock equal to the number of shares of Preferred Stock submitted for conversion (in which case, such conversion shall be deemed rescinded) or deliver to such Holder the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(c)(i). For example, if a Holder purchases shares of Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted conversion of shares of Preferred Stock with respect to which the actual sale price of the Conversion Shares (including any brokerage commissions) giving rise to such purchase obligation was a total of \$10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder \$1,080. The Holder shall provide the Corporation written notice indicating the amounts payable to such Holder in respect of the Buy-In and, upon request of the Corporation, evidence of the amount

of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Corporation's failure to timely deliver the Conversion Shares upon conversion of the shares of Preferred Stock as required pursuant to the terms hereof.

v. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Preferred Stock and payment of dividends on the Preferred Stock, each as herein provided, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holder (and the other holders of the Preferred Stock), not less than such aggregate number of shares of the Common Stock as shall (subject to the terms and conditions set forth in the Underwriting Agreement) be issuable (taking into account the adjustments and restrictions of Section 7) upon the conversion of the then outstanding shares of Preferred Stock and payment of dividends hereunder. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable.

vi. Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the conversion of the Preferred Stock. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such conversion, the Corporation shall round down to the next whole share.

vii. Transfer Taxes and Expenses. The issuance of Conversion Shares on conversion of this Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such Conversion Shares, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such Conversion Shares upon conversion in a name other than that of the Holders of such shares of Preferred Stock and the Corporation shall not be required to issue or deliver such Conversion Shares unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid. The Corporation shall pay all Transfer Agent fees required for same-day processing of any Notice of Conversion and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Conversion Shares.

e) Beneficial Ownership Limitation. The Corporation shall not effect any conversion of the Preferred Stock, and a Holder shall not have the right to convert any portion of the Preferred Stock, to the extent that, after giving effect to the conversion set forth on the applicable Notice of Conversion, such Holder (together with such Holder's

Affiliates, and any Persons acting as a group together with such Holder or any of such Holder's Affiliates (such Persons, "Attribution Parties") would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon conversion of the Preferred Stock with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (i) conversion of the remaining, unconverted Stated Value of Preferred Stock beneficially owned by such Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation subject to a limitation on conversion or exercise analogous to the limitation contained herein (including, without limitation, the Preferred Stock or the Warrants) beneficially owned by such Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 6(d), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent that the limitation contained in this Section 6(d) applies, the determination of whether the Preferred Stock is convertible (in relation to other securities owned by such Holder together with any Affiliates and Attribution Parties) and of how many shares of Preferred Stock are convertible shall be in the sole discretion of such Holder, and the submission of a Notice of Conversion shall be deemed to be such Holder's determination of whether the shares of Preferred Stock may be converted (in relation to other securities owned by such Holder together with any Affiliates and Attribution Parties) and how many shares of the Preferred Stock are convertible, in each case subject to the Beneficial Ownership Limitation. To ensure compliance with this restriction, each Holder will be deemed to represent to the Corporation each time it delivers a Notice of Conversion that such Notice of Conversion has not violated the restrictions set forth in this paragraph and the Corporation shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 6(d), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (i) the Corporation's most recent periodic or annual report filed with the Commission, as the case may be, (ii) a more recent public announcement by the Corporation or (iii) a more recent written notice by the Corporation or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Corporation shall within two Trading Days confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Corporation, including the Preferred Stock, by such Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% (or upon the election by a Holder prior to the issuance of any shares of Preferred Stock) of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon

conversion of Preferred Stock held by the applicable Holder. A Holder, upon notice to the Corporation, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 6(d) applicable to its Preferred Stock provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon conversion of this Preferred Stock held by the Holder and the provisions of this Section 6(d) shall continue to apply. Any such increase in the Beneficial Ownership Limitation will not be effective until the 61<sup>st</sup> day after such notice is delivered to the Corporation and shall only apply to such Holder and no other Holder. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 6(d) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation contained herein or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of Preferred Stock.

#### Section 7. Certain Adjustments.

a) Stock Dividends and Stock Splits. If the Corporation, at any time while this Preferred Stock is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any other Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of, or payment of a dividend on, this Preferred Stock), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Corporation, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Adjustment Upon Issuance of Shares of Common Stock. If and whenever on or after the date of issuance (the "Issuance Date"), the Corporation issues or sells, or in accordance with this Section 7(b) is deemed to have issued or sold, any shares of Common Stock and/or Common Stock Equivalents (including the issuance or sale of shares of Common Stock owned or held by or for the account of the Corporation, but excluding any Exempt Issuance issued or sold or deemed to have been issued or sold) for a consideration per share (the "New Issuance Price") less than a price equal to the Set Price in effect immediately prior to such issuance or sale or deemed issuance or sale (such Set Price then in effect is referred to herein as the "Applicable Price") (the foregoing a "Dilutive Issuance"),

then immediately upon such Dilutive Issuance, the Set Price then in effect shall be reduced to an amount equal to the New Issuance Price. For all purposes of the foregoing (including, without limitation, determining the adjusted Set Price and the New Issuance Price under this Section 7(b)), the following shall be applicable:

- (i) Issuance of Options. If the Corporation in any manner grants or sells any rights, warrants or options to subscribe for or purchase shares of preferred stock and/or Common Stock or Common Stock Equivalents (“Options”) and the lowest price per share for which one share of Common Stock is at any time issuable upon the exercise of any such Option or upon conversion, exercise or exchange of any Common Stock Equivalents issuable upon exercise of any such Option or otherwise pursuant to the terms thereof is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Corporation at the time of the granting or sale of such Option for such price per share. For purposes of this Section 7(b)(i), the “lowest price per share for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option or otherwise pursuant to the terms thereof” shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Corporation with respect to any one share of Common Stock upon the granting or sale of such Option, upon exercise of such Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option or otherwise pursuant to the terms thereof and (y) the lowest exercise price set forth in such Option for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Common Stock Equivalents issuable upon exercise of any such Option or otherwise pursuant to the terms thereof Except as contemplated below, no further adjustment of the Set Price shall be made upon the actual issuance of such shares of Common Stock or of such Common Stock Equivalents upon the exercise of such Options or otherwise pursuant to the terms of or upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Common Stock Equivalents.
- (ii) Issuance of Common Stock Equivalents. If the Corporation in any manner issues or sells any Common Stock Equivalents and the lowest price per share for which one share of Common Stock is at any time issuable upon the conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Corporation at the time of the issuance or sale of such Common Stock Equivalents for such price per share. For the purposes of this Section 7(b)(ii), the “lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof or otherwise

pursuant to the terms thereof” shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Corporation with respect to one share of Common Stock upon the issuance or sale of the Common Stock Equivalent and upon conversion, exercise or exchange of such Common Stock Equivalent or otherwise pursuant to the terms thereof and (y) the lowest conversion price set forth in such Common Stock Equivalent for which one share of Common Stock is issuable upon conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof minus (2) the sum of all amounts paid or payable to the holder of such Common Stock Equivalent (or any other Person) upon the issuance or sale of such Common Stock Equivalent plus the value of any other consideration received or receivable by, or benefit conferred on, the holder of such Common Stock Equivalent (or any other Person). Except as contemplated below, no further adjustment of the Set Price shall be made upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Common Stock Equivalents or otherwise pursuant to the terms thereof, and if any such issuance or sale of such Common Stock Equivalents is made upon exercise of any Options for which adjustment of the Series B Preferred Stock has been or is to be made pursuant to other provisions of this Section 7(b), except as contemplated below, no further adjustment of the Set Price shall be made by reason of such issuance or sale.

- (iii) Change in Option Price or Rate of Conversion. If the purchase or exercise price provided for in any Options, the additional consideration, if any, payable upon the issue, conversion, exercise or exchange of any Common Stock Equivalents, or the rate at which any Common Stock Equivalents are convertible into or exercisable or exchangeable for shares of Common Stock increases or decreases at any time (other than proportional changes in conversion or exercise prices, as applicable, in connection with an event referred to in Section 7(a)), the Set Price in effect at the time of such increase or decrease shall be adjusted to the Set Price which would have been in effect at such time had such Options or Common Stock Equivalents provided for such increased or decreased purchase price, additional consideration or increased or decreased conversion rate, as the case may be, at the time initially granted, issued or sold. For purposes of this Section 7(b)(iii), if the terms of any Option or Common Stock Equivalents that was outstanding as of the Issuance Date are increased or decreased in the manner described in the immediately preceding sentence, then such Option or Common Stock Equivalents and the shares of Common Stock deemed issuable upon exercise, conversion or exchange thereof shall be deemed to have been issued as of the date of such increase or decrease. No adjustment pursuant to this Section 7(b) shall be made if such adjustment would result in an increase of the Set Price then in effect.

- (iv) Calculation of Consideration Received. If any Option and/or Common Stock Equivalent and/or Adjustment Right is issued in connection with the issuance or sale or deemed issuance or sale of any other securities of the Corporation (as determined by the Holder, the “Primary Security”, and such Option and/or Common Stock Equivalent and/or Adjustment Right, the “Secondary Securities” and together with the Primary Security, each a “Unit”), together comprising one integrated transaction, the aggregate consideration per share of Common Stock with respect to such Primary Security shall be deemed to be the lower of (x) the purchase price of such Unit, (y) if such Primary Security is an Option and/or Common Stock Equivalent, the lowest price per share for which one share of Common Stock is at any time issuable upon the exercise or conversion of the Primary Security in accordance with Section 7(b)(i) or 7(b)(ii) above and (z) the lowest VWAP of the Common Stock on any Trading Day during the four Trading Day period immediately following the public announcement of such Dilutive Issuance (for the avoidance of doubt, if such public announcement is released prior to the opening of the Trading Market on a Trading Day, such Trading Day shall be the first Trading Day in such four Trading Day period). If any shares of Common Stock, Options or Common Stock Equivalents are issued or sold or deemed to have been issued or sold for cash, the consideration received therefor will be deemed to be the net amount of consideration received by the Corporation therefor. If any shares of Common Stock, Options or Common Stock Equivalents are issued or sold for a consideration other than cash, the amount of such consideration received by the Corporation will be the fair value of such consideration, except where such consideration consists of publicly traded securities, in which case the amount of consideration received by the Corporation for such securities will be the arithmetic average of the VWAPs of such security for each of the five (5) Trading Days immediately preceding the date of receipt. If any shares of Common Stock, Options or Common Stock Equivalents are issued to the owners of the non-surviving entity in connection with any merger in which the Corporation is the surviving entity, the amount of consideration therefor will be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such shares of Common Stock, Options or Common Stock Equivalents (as the case may be). The fair value of any consideration other than cash or publicly traded securities will be determined jointly by the Corporation and the Holder. If such parties are unable to reach agreement within ten (10) days after the occurrence of an event requiring valuation (the “Valuation Event”), the fair value of such consideration will be determined within five (5) Trading Days after the tenth (10th) day following such Valuation Event by an independent, reputable appraiser jointly selected by the Corporation and the Holder. The determination of such appraiser shall be final and binding upon all parties absent manifest error and the fees and expenses of such appraiser shall be borne by the Corporation.



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

c) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 7(a) above, if at any time the Corporation grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder of will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of such Holder's Preferred Stock (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Pro Rata Distributions. During such time as this Preferred Stock is outstanding, if the Corporation shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Preferred Stock, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of this Preferred Stock (without regard to any limitations on conversion hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution ( provided, however, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall

not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

e) Fundamental Transaction. If, at any time while this Preferred Stock is outstanding, (i) the Corporation, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Corporation with or into another Person, (ii) the Corporation, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Corporation, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Corporation, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a “Fundamental Transaction”), then, upon any subsequent conversion of this Preferred Stock, the Holder shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 6(d) and Section 6(e) on the conversion of this Preferred Stock), the number of shares of Common Stock of the successor or acquiring corporation or of the Corporation, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to any limitation in Section 6(d) and Section 6(e) on the conversion of this Preferred Stock). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Preferred Stock following such Fundamental Transaction. To

the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The Corporation shall cause any successor entity in a Fundamental Transaction in which the Corporation is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents (as defined in the Underwriting Agreement) in accordance with the provisions of this Section 7(e) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the holder of this Preferred Stock, deliver to the Holder in exchange for this Preferred Stock a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Preferred Stock which is convertible for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon conversion of this Preferred Stock (without regard to any limitations on the conversion of this Preferred Stock) prior to such Fundamental Transaction, and with a conversion price which applies the conversion price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such conversion price being for the purpose of protecting the economic value of this Preferred Stock immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Certificate of Designation and the other Transaction Documents referring to the "Corporation" shall refer instead to the Successor Entity), and may exercise every right and power of the Corporation and shall assume all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Corporation herein.

f) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

g) Notice to the Holders.

i. Adjustment to Conversion Price. Whenever the Set Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder by facsimile or email a notice setting forth the Set Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Conversion by Holder. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of this Preferred Stock, and shall cause to be delivered by facsimile or email to each Holder at its last facsimile number or email address as it shall appear upon the stock books of the Corporation, at least twenty (20) calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Corporation or any of the Subsidiaries, the Corporation shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to convert the Conversion Amount of this Preferred Stock (or any part hereof) during the 20-day period commencing on the date of such notice through the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 8. [RESERVED]

Section 9. [RESERVED]

Section 10. Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion

(other than a Notice of Conversion required to be submitted electronically through the Depository Trust Company), shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at the address set forth above Attention: President and Chief Executive Officer, facsimile number (818) 224-5287, or such other facsimile number, e-mail address or address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section 10. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Corporation, or if no such facsimile number, e-mail address or address appears on the books of the Corporation, at the principal place of business of such Holder, as set forth in the Underwriting Agreement. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, (A) if such notice or communication is delivered via facsimile at the facsimile number or e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, or (B) if such notice or communication is a Notice of Conversion required to be submitted electronically through the Depository Trust Company pursuant to Section 6(a) and submitted prior to 5:00 p.m. (New York City time) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

b) Absolute Obligation. Except as expressly provided herein, no provision of this Certificate of Designation shall alter or impair the obligation of the Corporation, which is absolute and unconditional, to pay liquidated damages, accrued dividends and accrued interest, as applicable, on the shares of Preferred Stock at the time, place, and rate, and in the coin or currency, herein prescribed.

c) Lost or Mutilated Preferred Stock Certificate. If a Holder's Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership hereof reasonably satisfactory to the Corporation.

d) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Certificate of Designation shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware of incorporation, without regard to the principles of conflict of laws thereof. Each party agrees that all legal proceedings concerning the interpretation, enforcement and defense of the

transactions contemplated by any of the Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced in the state and federal courts sitting in the City of New York, Borough of Manhattan (the “New York Courts”). Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the New York Courts 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 suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such New York Courts, or such New York Courts are improper or 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 Certificate of Designation 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 applicable law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Certificate of Designation or the transactions contemplated hereby. If any party shall commence an action or proceeding to enforce any provisions of this Certificate of Designation, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys’ fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding.

e) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation on any other occasion. Any waiver by the Corporation or a Holder must be in writing.

f) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

g) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

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

i) Status of Converted or Redeemed Preferred Stock. Shares of Preferred Stock may only be issued pursuant to the Underwriting Agreement. If any shares of Preferred Stock shall be converted, redeemed or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B 8.0% Mandatorily Convertible Preferred Stock.

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RESOLVED, FURTHER, that the Chairman, the president or any vice-president, and the secretary or any assistant secretary, of the Corporation be and they hereby are authorized and directed to prepare and file this Certificate of Designation of Preferences, Rights and Limitations in accordance with the foregoing resolution and the provisions of Delaware law.

IN WITNESS WHEREOF, the undersigned have executed this Certificate this [\_\_ day of [\_\_\_\_] 2017.

\_\_\_\_\_  
Name: Anthony Gringeri  
Title: President and Chief Executive Officer

\_\_\_\_\_  
Name: David Fractor  
Title: Chief Financial Officer

**ANNEX A**

**NOTICE OF CONVERSION**

(TO BE EXECUTED BY THE REGISTERED HOLDER IN ORDER TO CONVERT SHARES OF PREFERRED STOCK)

The undersigned hereby elects to convert the number of shares of Series B 8.0% Mandatorily Convertible Preferred Stock indicated below into shares of common stock, par value \$0.0001 per share (the "Common Stock"), of ImmunoCellular Therapeutics, Ltd., a Delaware corporation (the "Corporation"), according to the conditions hereof, as of the date written below. If shares of Common Stock are to be issued in the name of a Person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto and is delivering herewith such certificates and opinions as may be required by the Corporation in accordance with the Underwriting Agreement. No fee will be charged to the Holders for any conversion, except for any such transfer taxes.

Conversion calculations:

Date to Effect Conversion: \_\_\_\_\_

Number of shares of Preferred Stock owned prior to Conversion: \_\_\_\_\_

Number of shares of Preferred Stock to be Converted: \_\_\_\_\_

Stated Value of shares of Preferred Stock to be Converted: \_\_\_\_\_

Number of shares of Common Stock to be Issued: \_\_\_\_\_

Applicable Conversion Price: \_\_\_\_\_

Number of shares of Preferred Stock subsequent to Conversion: \_\_\_\_\_

Address for Delivery: \_\_\_\_\_

or

DWAC Instructions:

Broker no: \_\_\_\_\_

Account no: \_\_\_\_\_

[HOLDER

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

Name:

Title:



**SERIES [1/2/3] PREFERRED STOCK WARRANT****IMMUNOCELLULAR THERAPEUTICS, LTD.**

Warrant Shares: Initial Exercise Date: [\_\_\_\_], 2017

THIS SERIES [1/2/3] WARRANT (the “*Warrant*”) certifies that, for value received, \_\_\_\_\_ or its assigns (the “*Holder*”) is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the “*Initial Exercise Date*”) and on or prior to 5:00 p.m. New York City time on the date that is the [three (3)/six (6)/twelve (12)] month anniversary of the Initial Exercise Date (the “*Termination Date*”) but not thereafter, to subscribe for and purchase from ImmunoCellular Therapeutics, Ltd., a Delaware corporation (the “*Company*”), up to \_\_\_\_\_ shares (as subject to adjustment hereunder, the “*Warrant Shares*”) of Preferred Stock. The purchase price of one share of Preferred Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). This Warrant is issued pursuant to (i) the Underwriting Agreement, dated as of [\_\_\_], 2017, between the Company and Maxim Group LLC (the “*Underwriting Agreement*”) and (ii) the Company’s Registration Statement on Form S-1 (File No.: 333-215331). This Warrant is one of a series of warrants containing substantially identical terms and conditions issued pursuant to the Underwriting Agreement (collectively, the “*Warrants*”).

**Section 1. DEFINITIONS** . In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

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

“*Bid Price*” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“*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.

“*Conversion Price*” means the then applicable conversion price of the Preferred Stock.

“*Conversion Shares*” means the shares issued and issuable upon conversion of the Preferred Stock.

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

“*Common Stock*” means (i) the Company’s shares of Common Stock, par value \$0.0001 per share, and (ii) any share capital

into which such Common Stock shall have been changed or any share capital resulting from a reclassification of such Common Stock.

“ **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, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

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

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

“ **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 (i) the Company’s shares of Series B 8.0% Mandatorily Convertible Preferred Stock, par value \$0.0001 per share, and (ii) any share capital into which such Preferred Stock shall have been changed or any share capital resulting from a reclassification of such Preferred Stock. “ **Securities Act** ” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“ **Trading Day** ” means a day on which the Common Stock is traded on a Trading Market.

“ **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, or the New York Stock Exchange (or any successors to any of the foregoing).

“ **Transfer Agent** ” means Computershare Trust Company, N.A., the current transfer agent of the Company, with a mailing address of 250 Royall Street, Canton, MA 02021, and any successor transfer agent of the Company.

“ **VWAP** ” means, for any date, the number of shares of Common Stock the Holder would have received upon conversion of one (1) share of Preferred Stock, multiplied by a price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “ **Pink Sheets** ” published by OTC Markets, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

## **Section 2. EXERCISE.**

(a) Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly executed facsimile copy (or e-mail attachment) of the Notice of Exercise in the form annexed hereto. Within three (3) Trading Days following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the

cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. Upon exercise of this Warrant or within one (1) day of exercise, if the Holder delivers of Notice of Conversion converting all or any portion of the Preferred Stock, the Company shall deliver Conversion Shares in lieu of Warrant Shares otherwise pursuant to the terms of this Warrant and the Certificate of Designation. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.

**(b) Exercise Price** . The exercise price per share of the Preferred Stock under this Warrant shall be \$1,000.00, subject to adjustment hereunder (the “*Exercise Price*”).

**(c) Cashless Exercise** .

a) Cashless Exercise . If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of, the shares of Common Stock issuable upon conversion of the Preferred Stock issued and issuable pursuant to exercise of this Warrant, then this Warrant may alternatively be exercised, in whole or in part, at such time by means of a “cashless exercise” in which the Holder shall be entitled to receive a number of shares of Common Stock equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

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

(B) = the lowest Conversion Price of the Preferred Stock at the time of exercise of this Warrant, as adjusted hereunder; and

(X) = the highest number of shares of Common Stock (based on the lowest Conversion Price of the Preferred Stock at the time of exercise) that would be issuable upon conversion of all of the Preferred Stock issuable pursuant to such exercise of this Warrant.

If Conversion Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Conversion Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

**(d) Mechanics of Exercise.**

**(i) Delivery of Warrant Shares Upon Exercise** . The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder’s or its designee’s balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system (“*DWAC*”) if the Company is

then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise that is the earlier of (i) the earlier of (A) three (3) Trading Days after the delivery to the Company of the Notice of Exercise and (B) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (ii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the "**Warrant Share Delivery Date**"). The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the date the Warrant has been exercised, with payment to the Company of the Exercise Price (or by cashless exercise, if permitted) and all taxes required to be paid by the Holder, if any, pursuant to Section 2(d)(vi) prior to the issuance of such shares, having been paid. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

**(ii) Delivery of New Warrants Upon Exercise** . If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

**(iii) Rescission Rights** . If the Company fails to issue the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

**(iv) Compensation for Buy-In on Failure to Timely Deliver Warrant Shares and/or Conversion Shares, as Applicable, Upon Exercise** . In addition to any other rights available to the Holder, if the Company fails to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Conversion Shares issuable upon Conversion of the Warrant Shares which the Holder anticipated receiving upon such exercise and conversion (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Conversion Shares issuable upon conversion of the Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued upon conversion of the Warrant Shares had the Company timely complied with its exercise and delivery obligations hereunder. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver Conversion Shares issuable pursuant to the exercised Warrant as required pursuant to the terms hereof.

**(v) No Fractional Shares or Scrip** . No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall round down to the next whole share.

**(vi) Charges, Taxes and Expenses** . Issuance of Warrant Shares shall be made without charge to the Holder for

any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

(vii) **Closing of Books** . The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

### **Section 3. CERTAIN ADJUSTMENTS.**

(a) **Stock Dividends and Splits** . If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Preferred Stock or any other equity or equity equivalent securities payable in shares of Preferred Stock (which, for avoidance of doubt, shall not include any shares of Preferred Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Preferred Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Preferred Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Preferred Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Preferred Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Preferred Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

(b) **Fundamental Transaction** . If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a “**Fundamental Transaction**”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder, the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “**Alternate Consideration**”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock issuable upon conversion of the shares of Preferred Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate

Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “**Successor Entity**”) to assume in writing all of the obligations of the Company under this Warrant and the other Transaction Documents in accordance with the provisions of this Section 3(b) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant and the other Transaction Documents referring to the “**Company**” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Company herein.

**(c) Calculations** . All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

**(d) Notice to Holder.**

**(i) Adjustment to Exercise Price** . Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly mail to the Holder a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

**(ii) Notice to Allow Exercise by Holder** . If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be mailed to the Holder at its last address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective

date of the event triggering such notice except as may otherwise be expressly set forth herein.

#### **Section 4. TRANSFER OF WARRANT.**

(a) **Transferability** . This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date the Holder delivers an assignment form to the Company assigning this Warrant full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

(b) **New Warrants** . This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto. )

(c) **Warrant Register** . The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the “*Warrant Register*”), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

#### **Section 5. MISCELLANEOUS.**

(a) **No Rights as Stockholder Until Exercise** . This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3.

(b) **Loss, Theft, Destruction or Mutilation of Warrant** . The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate. )

(c) **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.

(d) **Authorized Shares.**

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure

that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant. T

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

**(e) Jurisdiction** . This Warrant shall be governed by, and construed in accordance with, the internal laws of the State of New York, without reference to the choice of law provisions thereof. The Company and, by accepting this Warrant, the Holder, each irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Warrant and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Warrant. The Company and, by accepting this Warrant, the Holder, each irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. The Company and, by accepting this Warrant, the Holder, each irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. **EACH OF THE COMPANY AND, BY ITS ACCEPTANCE HEREOF, THE HOLDER HEREBY WAIVES ANY RIGHT TO REQUEST A TRIAL BY JURY IN ANY LITIGATION WITH RESPECT TO THIS WARRANT AND REPRESENTS THAT COUNSEL HAS BEEN CONSULTED SPECIFICALLY AS TO THIS WAIVER.**

**(f) Restrictions** . The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

**(g) Nonwaiver and Expenses** . No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder. )

**(h) Notices** . The Company shall provide Holder with prompt written notice of all actions taken pursuant to this Warrant. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in writing, will be mailed (a) if within the domestic United States by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, or by facsimile or (b) if delivered from outside the United States, by International Federal Express or facsimile, and (c) will be deemed given (i) if delivered by first-class registered or certified mail domestic, three (3) business days



after so mailed, (ii) if delivered by nationally recognized overnight carrier, one (1) business day after so mailed, (iii) if delivered by International Federal Express, two (2) business days after so mailed and (iv) if delivered by facsimile, upon electronic confirmation of receipt, and will be delivered and addressed as follows:

if to the Company, to:

ImmunoCellular Therapeutics, Ltd.  
23622 Calabasas Road, Suite 300  
Calabasas, California 91302  
Attn: Anthony Gringeri, President and Chief Executive Officer  
Facsimile: (818) 224-5287

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

Cooley LLP  
3175 Hanover Street  
Palo Alto, California 94304  
Attn: Glen Y. Sato  
Facsimile: (650) 849-7400

if to the Holder, at the address of the Holder appearing on the books of the Company

**(i) Limitation of Liability** . No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company. )

**(j) Remedies** . The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate. )

**(k) Successors and Assigns** . Subject to applicable securities laws, this 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 Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares. )

**(l) Amendment** . Except as otherwise provided herein, the provisions of this Warrant may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder. Any such amendment shall apply to all Warrants and be binding upon all registered holders of such Warrants.

**(m) Severability** . Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this 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 Warrant.

**(n) Headings** . The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

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*(Signature Page Follows)*

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

**IMMUNOCELLULAR THERAPEUTICS, LTD.**

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

**NOTICE OF EXERCISE**

TO: ImmunoCellular Therapeutics, Ltd.

- (1) The undersigned hereby elects to purchase \_\_\_ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.
- (2) Payment shall take the form of (check applicable box):
  - in lawful money of the United States; or
  - [if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).
- (3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

—

The Warrant Shares shall be delivered to the following DWAC Account Number:

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—  
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[SIGNATURE OF HOLDER]

Name of Investing Entity: \_\_\_

Signature of Authorized Signatory of Investing Entity: \_\_\_

Name of Authorized Signatory: \_\_\_

Title of Authorized Signatory: \_\_\_

Date: \_\_

**EXHIBIT B**

ASSIGNMENT FORM

*(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)*

VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: \_\_ \_\_

(Please Print)

Address: \_\_

—  
—  
—

Dated: \_\_

Holder's Signature: \_\_

Holder's Address: \_\_

July 7, 2017

ImmunoCellular Therapeutics, Ltd.  
23622 Calabasas Road, Suite 300  
Calabasas, California 91302

Ladies and Gentlemen:

We have acted as counsel to ImmunoCellular Therapeutics, Ltd., a Delaware corporation, (the "**Company**"), in connection with the filing of a registration statement (No. 333-215331) on Form S-1 (the "**Registration Statement**") with the Securities and Exchange Commission, including a related prospectus filed with the Registration Statement (the "**Prospectus**"), covering an underwritten public offering consisting of (i) up to 5,000 shares (the "**Preferred Shares**") of the Company's Series B 8.0% Mandatorily Convertible Preferred Stock of the Company, par value \$0.0001 per share ("**Series B Preferred Stock**"), (ii) Series 1 Warrants (the "**Series 1 Warrants**") to purchase up to 3,000 shares of Series B Preferred Stock, (iii) Series 2 Warrants (the "**Series 2 Warrants**") to purchase up to 3,000 shares of Series B Preferred Stock, and (iv) Series 3 Warrants (the "**Series 3 Warrants**") to purchase up to 3,000 shares of Series B Preferred Stock (the Series 1 Warrants, the Series 2 Warrants and the Series 3 Warrants are collectively referred to as the "**Warrants**"), such Warrants representing the right to purchase in the aggregate up to 9,000 shares of Series B Preferred Stock (the "**Warrant Shares**"). The Preferred Shares and the Warrant Shares are to be convertible into shares (the "**Conversion Shares**") of the Company's common stock, par value \$0.0001 per share (the "**Common Stock**"). The Preferred Shares and the Warrants are to be sold by the Company as described in the Registration Statement.

In connection with this opinion, we have (i) examined and relied upon (a) the Registration Statement and the related Prospectus, (b) the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, each as currently in effect, and (c) the originals or copies certified to our satisfaction of such other documents, records, certificates, memoranda and other instruments as we deem necessary or appropriate to enable us to render the opinion expressed below, (ii) assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies; the accuracy, completeness and authenticity of certificates of public officials, and the due authorization, execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof (except that due authorization by the Company is not assumed), (iii) assumed the approval of the form of the Certificate of Designations, Preferences and Rights of Series B Preferred Stock by the Pricing Committee of the Board of Directors of the Company and its filing with the Secretary of State of the State of Delaware and (iv) assumed that the terms of the sale of the Preferred Shares and the Warrants to be sold to the underwriters by the Company will be authorized by the Board of Directors of the Company or the Pricing Committee in accordance with Sections 152 and 153 of the General Corporation Law of the State of Delaware (the "**DGCL**"). As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought to independently verify such matters.

Our opinion is expressed only with respect to the DGCL and, as to the Warrants constituting valid and legally binding obligations of the Company, with respect to the laws of the State of New York. We express no opinion as to whether the laws of any particular jurisdiction apply and no opinion

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IMAGE HERE

to the extent that the laws of any jurisdiction other than those identified above are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state law, rule or regulation relating to securities, or to the sale or issuance thereof.

With regard to our opinion concerning the Warrants constituting valid and binding obligations of the Company:

(i) Our opinion is subject to, and may be limited by, (a) applicable bankruptcy, reorganization, insolvency, moratorium, fraudulent conveyance, debtor and creditor, and similar laws which relate to or affect creditors' rights generally, and (b) general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing) regardless of whether considered in a proceeding in equity or at law.

(ii) Our opinion is subject to the qualification that the availability of specific performance, an injunction or other equitable remedies is subject to the discretion of the court before which the request is brought.

(iii) We express no opinion as to any provision of the Warrants that: (a) provides for liquidated damages, buy-in damages, monetary penalties, prepayment or make-whole payments or other economic remedies to the extent such provisions may constitute unlawful penalties, (b) relates to advance waivers of claims, defenses, rights granted by law, or notice, opportunity for hearing, evidentiary requirements, statutes of limitations, trial by jury, or procedural rights, (c) restricts non-written modifications and waivers, (d) provides for the payment of legal and other professional fees where such payment is contrary to law or public policy, (e) relates to exclusivity, election or accumulation of rights or remedies, (f) authorizes or validates conclusive or discretionary determinations, or (g) provides that provisions of the Warrants are severable to the extent an essential part of the agreed exchange is determined to be invalid and unenforceable.

(iv) We express no opinion as to whether a state court outside of the State of New York or a federal court of the United States would give effect to the choice of New York law provided for in the Warrants.

With respect to the Warrant Shares and the Conversion Shares, we express no opinion to the extent that, notwithstanding its current reservation of shares of the Series B Preferred Stock or shares of the Common Stock, future issuances of securities of the Company and/or adjustments to outstanding securities of the Company cause the Warrants to be exercisable for more shares of the Series B Preferred Stock, or the Preferred Shares or the Warrant Shares to be convertible into, more shares of the Common Stock, than the number of shares that then remain authorized but unissued. Further, we have assumed the Exercise Price (as defined in the Warrants) will not be adjusted to an amount below the par value per share of the Series B Preferred Stock and that the price for conversion of the Preferred Shares and the Warrant Shares into Conversion Shares will not be less than \$0.35 per Conversion Share as provided in the Prospectus.

On the basis of the foregoing, and in reliance thereon, we are of the opinion (i) that the Preferred Shares, when sold in accordance with the Registration Statement and the Prospectus, will be validly issued, fully paid and nonassessable, (ii) provided that the Warrants have been duly executed and delivered by the Company to the purchasers thereof against payment therefor, the Warrants,

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ImmunoCellular Therapeutics, Ltd.

Page Two

IMAGE HERE

when issued and sold as contemplated in the Registration Statement and the Prospectus, will be valid and binding obligations of the Company, (iii) the Warrant Shares, when issued and paid for in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable, and (iv) the Conversion Shares, when issued upon conversion of the Preferred Shares and the Warrant Shares in accordance with the terms of the Series B Preferred Stock, will be validly issued, fully paid and nonassessable.

We consent to the reference to our firm under the caption “Legal Matters” in the Prospectus and to the filing of this opinion as an exhibit to the Registration Statement.

This opinion is expressed as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or of any subsequent changes in applicable law.

Sincerely,

Cooley LLP

By: /s/ Glen Y. Sato

Glen Y. Sato

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of ImmunoCellular Therapeutics, Ltd. on Amendment No. 3 to Form S-1 (File No. 333-215331) of our report dated March 9, 2017, which includes an explanatory paragraph as to ImmunoCellular Therapeutics, Ltd's ability to continue as a going concern, with respect to our audits of the consolidated financial statements of ImmunoCellular Therapeutics, Ltd. as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014 appearing in the Annual Report on Form 10-K of ImmunoCellular Therapeutics, Ltd. for the year ended December 31, 2016. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ Marcum LLP

Marcum LLP  
Irvine, CA  
July 7, 2017