IMMUNOCELLULAR THERAPEUTICS, LTD.

FORM 10-Q
(Quarterly Report)

Filed 05/15/17 for the Period Ending 03/31/17

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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2017

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 001-35560

ImmunoCellular Therapeutics, Ltd.
(Exact name of registrant as specified in its charter)

Delaware	**93-1301885**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**
23622 Calabasas Road, Suite 300 Calabasas, California	**91302**
(Address of principal executive offices)	**(Zip code)**

(818) 264-2300
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated Filer	☐
Non-accelerated filer (Do not check if a smaller reporting company)	☐	Smaller reporting company	☒
Emerging growth company	☐		

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The Issuer had 3,464,175 shares of its common stock issued as of May 12, 2017 .

ImmunoCellular Therapeutics, Ltd.

FORM 10-Q

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PART 1
FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements

ImmunoCellular Therapeutics, Ltd.

Condensed Consolidated Balance Sheets

	March 31, 2017 (unaudited)	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	$ 5,341,433	$ 11,437,118
Supplies for clinical trials	1,302,206	1,186,186
Other assets	494,188	791,485
Total current assets	7,137,827	13,414,789
Property and equipment, net	93,228	109,823
Supplies for clinical trials	1,138,347	1,309,648
Deposits	1,920,894	1,955,514
Deferred financing costs	216,425	100,216
Total assets	$ 10,506,721	$ 16,889,990
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$ 914,573	$ 1,342,126
Accrued compensation and benefits	234,102	1,109,864
Accrued liabilities	1,010,137	786,953
Total current liabilities	2,158,812	3,238,943
CIRM liability	7,398,400	6,945,741
Warrant liability	470,784	573,560
Total liabilities	10,027,996	10,758,244
Commitments and contingencies (Note 5)		
Shareholders' equity:		
Preferred stock $0.0001 par value, 1,000,000 shares authorized; 0 shares outstanding as of March 31, 2017 and December 31, 2016	—	—
Common stock, $0.0001 par value; 25,000,000 shares authorized; 3,449,075 and 3,444,859 shares issued and outstanding as of March 31, 2017 and December 31, 2016, respectively	345	344
Additional paid-in capital	102,526,809	102,354,844
Accumulated deficit	(102,048,429)	(96,223,442)
Total shareholders' equity	478,725	6,131,746
Total liabilities and shareholders' equity	$ 10,506,721	$ 16,889,990

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

ImmunoCellular Therapeutics, Ltd.

Condensed Consolidated Statements of Operations
(unaudited)

	For the Three Months Ended March 31, 2017	For the Three Months Ended March 31, 2016
Revenues	$ —	$ —
Expenses:		
Research and development	4,685,720	4,737,575
General and administrative	793,178	1,099,832
Total expenses	5,478,898	5,837,407
Loss before other income (expense)		

and taxes	(5,478,898)	(5,837,407)
Interest income	3,794	2,514
Interest expense	(452,659)	(264,827)
Financing expense	—	(14,636)
Change in fair value of warrant liability	102,776	481,011
Loss before provision for income taxes	(5,824,987)	(5,633,345)
Provision for income taxes	—	—
Net loss	$ (5,824,987)	$ (5,633,345)
Net loss per share	$ (1.64)	$ (2.47)
Weighted average number of shares outstanding basic and diluted:	3,549,514	2,281,815

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

ImmunoCellular Therapeutics, Ltd.

Condensed Consolidated Statements of Shareholders' Equity (Deficit)
(unaudited)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total
	Shares	Amount			
Balance at December 31, 2016	3,444,859	$ 344	$ 102,354,844	$ (96,223,442)	$ 6,131,746
Stock based compensation	4,216	1	171,965	—	171,966
Net loss	—	—	—	(5,824,987)	(5,824,987)
Balance at March 31, 2017	3,449,075	$ 345	$ 102,526,809	$ (102,048,429)	$ 478,725

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

ImmunoCellular Therapeutics, Ltd.

Condensed Consolidated Statements of Cash Flows
(unaudited)

	For the Three Months Ended March 31, 2017	For the Three Months Ended March 31, 2016
Cash flows from operating activities:		
Net loss	$ (5,824,987)	$ (5,633,345)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	16,595	20,370
Change in fair value of warrant liability	(102,776)	(481,011)
Financing expense	—	14,636
Stock-based compensation	171,966	227,435
Accrued interest on CIRM award	452,659	264,827
Changes in assets and liabilities:		
Other assets	297,297	185,052
Supplies for clinical trials	55,281	(356,182)
Deposits	34,620	413,402
Accounts payable	(518,434)	(249,821)
Accrued compensation and benefits	(875,762)	(575,079)
Accrued liabilities	223,184	818,795
Net cash used in operating activities	(6,070,357)	(5,350,921)
Cash flows from investing activities:		
Purchase of property and equipment	—	(4,015)
Net cash used in investing activities	—	(4,015)
Cash flows from financing activities:		
Proceeds from the issuance of common stock through controlled equity offering	—	264,668
Deferred financing costs	(25,328)	—
Net cash (used in) provided by financing activities	(25,328)	264,668
(Decrease) in cash and cash equivalents	(6,095,685)	(5,090,268)
Cash and cash equivalents, beginning of period	11,437,118	22,604,481
Cash and cash equivalents, end of period	$ 5,341,433	$ 17,514,213
Supplemental cash flows disclosures:		
Interest expense paid	$ —	$ —
Income taxes paid	$ —	$ —
Supplemental non-cash disclosures:		
Financing costs included in accounts payable	$ 90,881	$ 8,593

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

1. Nature of Organization (Planned Principal Operations Have Not Commenced)

ImmunoCellular Therapeutics, Ltd. (the Company) is seeking to develop and commercialize new therapeutics to fight cancer using the immune system. These condensed consolidated financial statements include the Company's wholly owned subsidiaries, ImmunoCellular Bermuda, Ltd. in Bermuda and ImmunoCellular Therapeutics (Ireland) Limited and ImmunoCellular Therapeutics (Europe) Limited in Ireland, that were formed during 2014.

The Company has been primarily engaged in the acquisition of certain intellectual property, together with development of its product candidates and the recent clinical testing for its immunotherapy product candidates, and has not generated any recurring revenues. The Company has begun phase 3 testing of its lead product candidate, ICT-107, in which the Company originally anticipated randomizing 414 patients at about 120 clinical sites in the United States, Canada and Europe. The Company submitted an amendment to the phase 3 protocol to the FDA on December 30, 2016 that modifies some elements of how patients qualify for the trial, raises the target number of randomized patients to 542 , and extends completion of the trial to mid-2021. The amendment was allowed by the FDA in March 2017. The Company has submitted similar protocol amendments to regulatory agencies in Canada and the European countries participating in the trial. The Company has two other product candidates, ICT-140 and ICT-121, both with investigational new drug (IND) applications active at the US Food and Drug Administration (FDA). During the third quarter of 2016, the Company completed its enrollment of ICT-121 and closed the trial in March 2017. The Company is holding the initiation of its ICT-140 trial until it can find a partner for the program to share expenses or until it has secured sufficient financial resources to complete the ICT-107 phase 3 program. Additionally, the Company has acquired the rights to technology for the development of certain Stem-to-T-cell immunotherapies for the treatment of cancer. The Company has incurred operating losses and, as of March 31, 2017 , the Company had an accumulated deficit of $102,048,429 . The Company expects to incur significant research, development and administrative expenses before any of its products can be launched and recurring revenues generated.

The Company's activities are subject to significant risks and uncertainties, including the failure of any of the Company's product candidates to achieve clinical success or to obtain regulatory approval. Additionally, it is possible that other companies with competing products and technology might obtain regulatory approval ahead of the Company. The Company will need significant amounts of additional funding in order to complete the development of any of its product candidates and the availability and terms of such funding cannot be assured.

Interim Results

The accompanying condensed consolidated financial statements as of March 31, 2017 and for the three month periods ended March 31, 2017 and 2016 are unaudited, but include all adjustments, consisting of normal recurring entries, which the Company's management believes to be necessary for a fair presentation of the periods presented. Interim results are not necessarily indicative of results for a full year. Balance sheet amounts as of December 31, 2016 have been derived from the Company's audited financial statements included in its Form 10-K for the year ended December 31, 2016 filed with the Securities and Exchange Commission (SEC) on March 9, 2017.

The condensed consolidated financial statements included herein have been prepared by the Company pursuant to the rules and regulations of the SEC. Certain information and note disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the U.S. (GAAP) have been condensed or omitted pursuant to such rules and regulations. The condensed consolidated financial statements should be read in conjunction with the Company's audited financial statements in its Form 10-K for the year ended December 31, 2016 . The Company's operating results will fluctuate for the foreseeable future. Therefore, period-to-period comparisons should not be relied upon as predictive of the results in future periods.

2. Summary of Significant Accounting Policies

Basis of presentation and going concern - The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. Since inception, the Company has been engaged in research and development activities and has not generated any cash flows from operations. Through March 31, 2017 , the Company has incurred accumulated losses of $102,048,429 and as of March 31, 2017 , the Company had $5,341,433 of cash. The Company

believes that it will not have enough cash resources to fund the business for the next 12 months. Successful completion of the Company's research and development activities, and its transition to attaining profitable operations, is dependent upon obtaining additional financing. Additional financing may not be available on acceptable terms or at all. If the Company issues 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 the Company cannot raise funds, it might be forced to make substantial reductions in the on-going clinical trials, thereby damaging the Company's reputation in the biotech and medical communities, which could adversely affect the Company's ability to implement its business plan and its viability. These factors raise substantial doubt about the Company's ability to continue as a going concern. These consolidated financial statements do not include any adjustment that might result from the outcome of this uncertainty.

The Company plans to improve its liquidity by obtaining additional financing through the issuance of financial instruments such as equity and warrants or through the receipt of grants and awards. Additionally, the Company is undertaking an evaluation of strategic alternatives, 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 the Company evaluates strategic alternatives, it plans to continue to advance its research and development strategies, including the execution of the phase 3 trial of ICT-107.

Principles of Consolidation - The condensed consolidated balance sheets include the accounts of the Company and its subsidiaries. The consolidated statements of operations include the Company's accounts and the accounts of its subsidiaries from the date of acquisition. All intercompany transactions and balances have been eliminated in consolidation.

Cash and cash equivalents – The Company considers all highly liquid instruments with an original maturity of 90 days or less at acquisition to be cash equivalents. As of March 31, 2017 and December 31, 2016 , the Company had $466,111 and $3,462,617 , respectively, of certificates of deposit. The Company places its cash and cash equivalents with various banks in order to maintain FDIC insurance on all of its investments.

Supplies for clinical trials - Supplies are stated at the lower of cost or market, with cost determined by the first-in, first-out basis and consist of items that will be used in the Company's ongoing clinical trials. Management analyzes historical and prospective usage to estimate obsolescence and did not record any reserve for obsolescence during the three month period ended March 31, 2017 . Additionally, management has estimated supply usage in the next twelve months to determine the balance sheet classification between current and non-current.

Property and Equipment – Property and equipment are stated at cost and depreciated using the straight-line method based on the estimated useful lives (generally three to five years) of the related assets. Computer and computer equipment are depreciated over three years . Management continuously monitors and evaluates the realizability of recorded long-lived assets to determine whether their carrying values have been impaired. The Company records impairment losses on long-lived assets used in operations when events and circumstances indicate that the assets might be impaired and the nondiscounted cash flows estimated to be generated by those assets are less than the carrying amount of those assets. Any impairment loss is measured by comparing the fair value of the asset to its carrying amount. Repairs and maintenance costs are expensed as incurred.

Research and Development Costs – Research and development expenses consist of costs incurred for direct research and development and are expensed as incurred.

Stock Based Compensation – The Company records the cost for all share-based payment transactions in the Company's consolidated financial statements. Stock option grants issued to employees and officers and directors were valued using the Black-Scholes pricing model. The Company did not issue any stock-based compensation during the three months ended March 31, 2017 .

Fair value was estimated at the date of grant using the following weighted average grant date assumptions:

	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Risk-free interest rate	—%	1.3%
Expected dividend yield	None	None
Expected life	0.0 years	6.0 years
Expected volatility	—%	82.7%
Expected forfeitures	—%	—%

The risk-free interest rate used is based on the implied yield currently available in U.S. Treasury securities at maturity with an equivalent term. The Company has not declared or paid any dividends and does not currently expect to do so in the future. The expected term of options represents the period that our stock-based awards are expected to be outstanding and was determined based on projected holding periods for the remaining unexercised options. Consideration was given to the contractual terms of our stock-based awards, vesting schedules and expectations of future employee behavior. The expected volatility is based upon the historical volatility of the Company's common stock. Forfeitures are accounted for when they occur.

The Company's stock price volatility and option lives involve management's best estimates, both of which impact the fair value of the option calculated and, ultimately, the expense that will be recognized over the life of the option.

When options are exercised, our policy is to issue reserved but previously unissued shares of common stock to satisfy share option exercises. As of March 31, 2017 , the Company had 19,500,060 shares of authorized and unreserved common stock.

No tax benefits were attributed to the stock-based compensation expense because a valuation allowance was maintained for all net deferred tax assets.

Income Taxes – The Company accounts for federal and state income taxes under the liability method, with a deferred tax asset or liability determined based on the difference between the financial statement and tax basis of assets and liabilities, as measured by the enacted tax rates. The Company's provision for income taxes represents the amount of taxes currently payable, if any, plus the change in the amount of net deferred tax assets or liabilities. A valuation allowance is provided against net deferred tax assets if recoverability is uncertain on a more likely than not basis. As of March 31, 2017 and December 31, 2016 , the Company fully reserved its deferred tax assets. The Company recognizes in its financial statements the impact of an uncertain tax position if the position will more likely than not be sustained upon examination by a taxing authority, based on the technical merits of the position. The Company's policy is to recognize interest related to unrecognized tax benefits as interest expense and penalties as operating expenses. As of March 31, 2017 , the Company had no unrecognized tax benefits and as such, no liability, interest or penalties were required to be recorded. The Company does not expect this to change significantly in the next twelve months. The Company has determined that its main taxing jurisdictions are the United States of America and the State of California. The Company is not currently under examination by any taxing authority nor has it been notified of a pending examination. The Company's tax returns are generally no longer subject to examination for the years before December 31, 2011 for the state and December 31, 2012 for the federal taxing authority.

During 2014, the Company licensed the non-U.S. rights to a significant portion of its intellectual property to its Bermuda-based subsidiary for approximately $11.0 million . The fair value of the intellectual property rights was determined by an independent third party. The proceeds from this sale represented a gain for U.S. tax purposes and were offset by current year losses and net operating loss carryforwards. However, the Internal Revenue Service, or the IRS, or the California Franchise Tax Board, or the CFTB, could challenge the valuation of the intellectual property rights and assess a greater valuation, which would require the Company to utilize a larger portion, or all, of its available net operating losses. If an IRS or a CFTB valuation exceeds the available net operating losses, the Company would incur additional income taxes. The Company's ability to use its net operating losses is subject to the limitations of IRS Section 382, as well as expiration of federal and state net operating loss carryforwards .

Fair Value of Financial Instruments – The carrying amounts reported in the balance sheets for cash, cash equivalents, and accounts payable approximate their fair values due to their quick turnover. The fair value of warrant derivative liability is estimated using the Binomial Lattice option valuation model for warrants that are not publicly traded. The Company determines the fair value of the warrant derivative liability of its publicly traded warrants based upon the last trading price as of the balance sheet date.

Fair value for financial reporting is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The Company utilizes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The three levels of inputs that may be used to measure fair value are as follows:

Level 1—quoted prices in active markets for identical assets or liabilities

Level 2—quoted prices for similar assets and liabilities in active markets or inputs that are observable

Level 3—inputs that are unobservable (for example cash flow modeling inputs based on assumptions)

Warrant liabilities represent the only financial assets or liabilities recorded at fair value by the Company. The fair value of warrant liabilities is based on Level 1 or Level 3 inputs.

Reverse Stock Split - On November 18, 2016, the Company effected a one-for-forty reverse stock split of its common stock through an amendment to its amended and restated certificate of incorporation (the "COI Amendment"). As of the effective time of the reverse stock split, every forty shares of the Company's issued and outstanding common stock were converted into one issued and outstanding share of common stock, without any change in par value per share. The reverse stock split affected all shares of the Company's common stock outstanding immediately prior to the effective time of the reverse stock split, as well as the number of shares of common stock available for issuance under the Company's equity incentive plans and outstanding warrants. No fractional shares were issued as a result of the reverse stock split. Stockholders who would otherwise have been entitled to receive a fractional share received cash payments in lieu thereof. In addition, the COI Amendment reduced the number of authorized shares of common stock to 25.0 million .

Use of Estimates – The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make certain estimates and assumptions about the future outcome of current transactions which may affect the reporting and disclosure of these transactions. Accordingly, actual results could differ from those estimates used in the preparation of these consolidated financial statements.

The following critical accounting policies affect the Company's more significant judgments and estimates used in the preparation of these consolidated financial statements:

Stock-Based Compensation - Stock-based compensation expense is estimated as of the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which generally equals the vesting period, based on the number of awards that are expected to vest. Estimating the fair value for stock options requires judgment, including the expected term of the Company's stock options, volatility of the Company's stock, expected dividends, risk-free interest rates over the expected term of the options and the expected forfeiture rate. In connection with performance based programs, the Company makes assumptions principally related to the number of awards that are expected to vest after assessing the probability that certain performance criteria will be met.

Warrant Liability - The fair value of the Company's derivative warrants that are not traded on the NYSE MKT is estimated using the Binomial Lattice option valuation model. The use of the Binomial Lattice option valuation model requires estimates including the volatility of the Company's stock, risk-free rates over the expected term of warrants and early exercise of the warrants. The Company determines the warrant derivative liability of its publicly traded warrants based upon the last trading price as of the balance sheet date.

Basic and Diluted Loss per Common Share – Basic and diluted loss per common share are computed based on the weighted average number of common shares outstanding. Common share equivalents (which consist of options and warrants) are excluded from the computation, since the effect would be antidilutive. Common share equivalents which could potentially dilute earnings per share, and which were excluded from the computation of diluted loss per share, totaled 1,727,017 shares and 908,056 shares at March 31, 2017 and 2016 , respectively.

Recently Issued Accounting Standards – In August 2014 , the FASB issued ASU No. 2014-15, which applies to entities that have substantial doubt about their ability to continue as a going concern. This update requires management to perform interim and annual assessments of the probability about the entity's ability to remain as a going concern for a period of one year from the date the financial statements are issued. Depending on management's conclusions about the entity's ability to remain as a going concern, the entity must make certain disclosures in its financial statements. This ASU is effective for annual periods ending after December 15, 2016. The adoption of this ASU did not have a material impact on the Company's consolidated results of operations, financial condition or liquidity.

In February 2016, the FASB issued ASU No. 2016-02, which requires lessees to recognize in the balance sheets, a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term (the lease asset). For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. This ASU is effective for fiscal years beginning after December 15, 2018. The adoption of this ASU is not expected to have a material impact on the Company's consolidated results of operations, finance condition or liquidity.

In March 2016, the FASB issued ASU No. 2016-09, which simplifies some of the rules relating to the accounting for stock options. Among other items, this update permits entities to account for stock option forfeitures when they occur unlike the current practice that requires estimation of forfeitures at the time of issuance. This ASU is effective for annual periods beginning after December 15, 2016, and early adoption is permitted. The Company has adopted this ASU, which has not had a material impact on the Company's consolidated results of operations, financial condition or liquidity.

Other recent accounting pronouncements issued by the FASB (including its Emerging Issues Task Force) and the Securities and Exchange Commission did not or are not believed by management to have a material impact on the Company's present or future consolidated financial statements.

3. Property and Equipment

Property and equipment consist of the following:

	March 31, 2017	December 31, 2016
Computers	$ 70,960	$ 70,960
Research equipment	305,066	305,066
	376,026	376,026
Accumulated depreciation	(282,798)	(266,203)
	$ 93,228	$ 109,823

Depreciation expense was $16,595 and $20,370 for the three months ended March 31, 2017 and 2016 , respectively.

4. Related-Party Transactions

Cedars-Sinai Medical Center License Agreement

Dr. John Yu, the Company's founder and member of the Company's Board of Directors, is a neurosurgeon at Cedars-Sinai Medical Center (Cedars-Sinai).

On May 13, 2015, the Company entered into an Amended and Restated Exclusive License Agreement (the Amended License Agreement) with Cedars-Sinai. Pursuant to the Amended License Agreement, the Company acquired an exclusive, worldwide license from Cedars-Sinai to certain patent rights and technology developed in the course of research performed at Cedars-Sinai into the diagnosis of diseases and disorders in humans and the prevention and treatment of disorders in humans utilizing cellular therapies, including dendritic cell-based vaccines for brain tumors and other cancers and neurodegenerative disorders. Under the Amended License Agreement, the Company will have exclusive rights to, among other things, develop, use, manufacture, sell and grant sublicenses to the licensed technology.

The Company has agreed to pay Cedars-Sinai specified milestone payments related to the development and commercialization of ICT-107, ICT-121 and ICT-140. The Company will be required to pay to Cedars-Sinai $1.0 million upon first commercial sale of the Company's first product. The Company will pay Cedars-Sinai single digit percentages of gross revenues from the sales of products and high-single digit to low-double digit percentages of the Company's sublicensing income based on the licensed technology. During the three months ended March 31, 2016 , the Company incurred $100,000 of licensing fees to Cedars-Sinai. No licensing fees were incurred during the three months ended March 31, 2017 .

The Amended License Agreement will terminate on a country-by-country basis on the expiration date of the last-to-expire licensed patent right in each such country. Either party may terminate the Amended License Agreement in the event of the other party's material breach of its obligations under the Agreement if such breach remains uncured 60 days after such party's receipt of written notice of such breach. Cedars-Sinai may also terminate the Amended License Agreement upon 30 days' written notice to the Company that a required payment by the Company to Cedars-Sinai under the Amended License Agreement is delinquent.

The Company has also entered into various sponsored research agreements with Cedars-Sinai and has paid an aggregate of approximately $1.2 million . The last agreement concluded on March 19, 2014 at an incremental cost of $126,237 . During the three months ended March 31, 2017 and 2016 , Cedars-Sinai did not perform any research activities on behalf of the Company.

5. Co mmitments and Contingencies

Legal Proceedings

On May 1, 2017, a purported securities class action lawsuit was filed in the United States District Court for the Central District of California, captioned *Arthur Kaye IRA FCC as Custodian DTD 6-8-00 v. ImmunoCellular Therapeutics, Ltd. et al* (Case No. 2:17-cv-03250) against the Company, certain of its current and former officers and directors and others. The complaint asserts violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, and SEC Rule 10b-5 promulgated thereunder, related to allegedly materially false or misleading statements made between May 1, 2012 and December 11, 2013. The complaint alleges, among other things, that the Company failed to disclose that it purportedly paid for articles to be published about ICT-107. The plaintiff seeks an award of unspecified damages, prejudgment and post-judgment interest, as well as reasonable attorneys' fees, and other costs. The Company intends to vigorously defend against the claims. It is possible that similar lawsuits may yet be filed in the same or other courts that name the same or additional defendants.

SEC Investigation

On December 8, 2016, the Company signed an offer of settlement with the SEC related to an investigation principally of a former Chief Executive Officer involving conduct between November 2011 and August 2012 regarding the publication of articles without disclosing that they were paid for by us or investor relations firms hired by us. The offer of settlement provided that, without admitting or denying allegations, the Company would consent to the entry of an administrative order requiring that we cease and desist from any future violations of Sections 17(a) and 17(b) of the Securities Act of 1933, as amended, and Section 10(b) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 thereunder, subject to approval by the Commissioners of the SEC. The Commissioners of the SEC accepted the offer and on April 10, 2017, the SEC issued the administrative cease and desist order.

Commitments

In an effort to expand the Company's intellectual property portfolio to use antigens to create personalized vaccines, the Company has entered into various intellectual property and research agreements. Those agreements are long-term in nature and are discussed below. In addition to the vendors described below, the Company has deposits with other vendors.

Sponsored Research Agreements

In an effort to expand the Company's intellectual property portfolio to use antigens to create personalized immunotherapies, the Company has entered into various intellectual property and research agreements. Those agreements are long-term in nature and are discussed below.

Novella Clinical LLC

On June 30, 2015, the Company entered into a Master Clinical Research Services Agreement with Novella Clinical LLC (Novella Clinical) to conduct the Phase 3 registration trial of IC T-107. Novella Clinical is a full-service, global clinical research organization providing clinical trial services to small and mid-sized oncology companies. Novella Clinical will supervise the trial in the United States, Europe and Canada and will recruit 542 patients with newly diagnosed glioblastoma. As of March 31, 2017 , the Company has deposits of $1,782,775 with Novella Clinical that will be applied against the final trial related invoices. Since the trial is not expected to be completed within the next twelve months, this amount is included in deposits and reflected as a non-current asset on the March 31, 2017 balance sheet. The Company may terminate this agreement upon 60 days ' notice.

Licensing Agreements

The Johns Hopkins University Licensing Agreement

On February 23, 2012, the Company entered into an Exclusive License Agreement, effective as of February 16, 2012, with The Johns Hopkins University (JHU) under which it received an exclusive, worldwide license to JHU's rights in and to certain intellectual property related to mesothelin-specific cancer immunotherapies. The Company is advancing a cancer immunotherapy program using JHU and other intellectual property according to commercially reasonable development timeline. If successful and a product ultimately is registered, the Company will either sell the product directly or via a third-party partnership.

Pursuant to the License Agreement, the Company agreed to pay an upfront licensing fee in the low hundreds of thousands of dollars, payable half in cash and half in shares of its common stock in two tranches, within 30 days of the effective date of the License Agreement and upon issuance of the first U.S. patent covering the subject technology. Annual minimum royalties or maintenance fees increase over time and range from low tens of thousands to low hundreds of thousands of dollars. In addition, the Company has agreed to pay milestone license fees upon completion of specified milestones, totaling single digit millions of dollars if all milestones are met. Royalties based on a low single digit percentage of net sales are also due on direct sales, while third party sublicensing payments will be shared at a low double digit percentage.

The Company and JHU each have termination rights that include termination for any reason and for reasons relating to specific performance or financial conditions. Effective September 24, 2013, the Company entered into an Amendment No. 1 to the Exclusive License Agreement that updated certain milestones. Effective August 7, 2015, the Company entered into a Second Amendment to the Exclusive License Agreement that amended certain sections of the License Agreement and further updated certain milestones.

California Institute of Technology

On September 9, 2014, the Company entered into an Exclusive License Agreement with the California Institute of Technology under which the Company acquired exclusive rights to novel technology for the development of certain antigen specific stem cell immunotherapies for the treatment of cancers.

Pursuant to the License Agreement, the Company agreed to pay a one time license fee, a minimum annual royalty based on a low single digit percentage of net revenues and an annual maintenance fee in the low tens of thousands of dollars. In addition, the Company has agreed to make certain milestone payments upon completion of specified milestones.

Cedars-Sinai Medical Center

In connection with the Cedars-Sinai Medical Center License Agreement and sponsored research agreement, the Company has certain commitments as described in Note 4.

Manufacturing

PharmaCell B.V.

In March 2015, the Company entered into an Agreement for GMP manufacturing of ICT-107 with PharmaCell B.V. (PharmaCell), pursuant to which PharmaCell will provide contract manufacturing services for the European production of ICT-107, a dendritic cell immunotherapy for the treatment of newly diagnosed glioblastoma.

The Company will pay for manufacturing services performed by PharmaCell under the Agreement pursuant to statements of work entered into from time to time. The Company may unilaterally terminate the Agreement upon 90 days' written notice to PharmaCell, or 30 days ' written notice in the event of a clinical hold or other suspension or early termination of a clinical trial. PharmaCell may terminate the Agreement in certain circumstances upon 90 days ' written notice to the Company. Either party may terminate the Agreement in the event of the other party's insolvency or for the other party's material breach of its obligations under the Agreement if such breach remains uncured after 30 days of receiving written notice of such breach. Absent early termination, the Agreement will continue until all services under applicable statements of work have been completed.

PCT, LLC

On June 11, 2015, the Company entered into a Services Agreement with PCT, LLC, a Caladrius Company (PCT), a subsidiary of Caladrius Biosciences, Inc.

Pursuant to the terms of the Agreement, PCT will provide current good manufacturing practice (cGMP) services for the Phase 3 manufacture of ICT-107 and Phase 1 manufacture of ICT-121. P CT will provide, among other things, a controlled environment room on a semi-dedicated basis and qualified personnel to conduct runs as the parties mutually agree in writing and schedule. PCT's facilities are registered with the FDA for testing; packaging; processing; storage; labeling and distribution of Peripheral Blood stem and Somatic Cell therapy products, and maintain cGMP-compliant quality systems.

The Company has agreed to pay monthly fees in connection with the use of a controlled environment room on a semi-dedicated basis and monthly fees for PCT personnel performing services under the Agreement.
Services to be performed under the Agreement terminate on the earlier of (i) December 31, 2018, (ii) the date the parties mutually agree, (iii) at any time following the earlier of the one year anniversary of the date on which the Company notifies PCT that services in the semi-dedicated controlled environment room are to commence and August 1, 2016, on the last day of the month following at leas t 120 days' written notice from the Company to PCT, or (iv) the last day of the month following at least 60 days' written notice from the Company to PCT that the Company has received a clinical hold issued by the FDA ordering the Company to suspend clinical trials for ICT-107. Either party may terminate the Agreement in the event of the other party's insolvency or for the other party's material breach of its obligations under the Agreement if such breach remains uncured after 30 days of receiving written notice of such bre ach.

Employment Agreements

The Company has employment agreements with its management that provide for a base salary, bonus and stock option grants. The aggregate annual base salary payable to this group is approximately $830,000 and the potential bonus is approximately $231,000 . During the three months ended March 31, 2017 , the Company did not issue any stock options or restricted stock units.

Operating Lease

The Company entered into a lease for office space effective June 15, 2013 and continuing through August 31, 2016 at an initial monthly rental of $8,063 . During 2016, the Company extended this lease through August 31, 2017 , at a monthly rental of $8,554 . Rent expense was approximately $27,000 for each of the three months ended March 31, 2017 and 2016 , respectively.

6. Shareholders' Equity

Underwritten Public Offering

In August 2016, the Company entered into an underwriting agreement with Maxim Group LLC, pursuant to which the Company received net proceeds of approximately $6.6 million (after deducting the underwriting discount and offering expenses) from the initial sale of 863,750 shares of the Company's common stock, base warrants to purchase 881,250 shares of common stock at an exercise price of $7.68 per share, and pre-funded warrants to purchase 311,250 shares of common stock at an exercise price of $0.40 per share. The underwriters partially exercised their option to purchase additional shares and warrants and purchased an additional 37,500 shares of the Company's common stock at a price of $6.00 per share and warrants to purchase 111,965 shares of common stock at an exercise price of $0.40 per warrant. The pre-funded warrants have a term of ten years , and the base warrants have a term of five years from the date of issuance. They also provide for a weighted average adjustment to the exercise price if the Company issues, or is deemed to issue, additional shares of common stock at a price per share less than the then effective price of the warrants, subject to certain exceptions (see "Warrant Liability" below). Due to the potential variability of their exercise price, these warrants do not qualify for equity treatment, and therefore are recognized as a liability. The pre-funded warrants were substantially paid for at the time of the offering and have an exercise price of $0.40 per share. These warrants qualify for equity treatment. Through December 31, 2016 , 208,750 pre-funded warrants were exercised and resulted in proceeds to the Company of $83,500 . No warrants were exercised during the three months ended March 31, 2017 .

Controlled Equity Offering

On April 18, 2013, the Company entered into a Controlled Equity Offering ^{SM} Sales Agreement (the Sales Agreement) with Cantor Fitzgerald & Co. (Cantor), as agent, pursuant to which the Company may offer from time to time through Cantor, shares of our common stock having an aggregate offering price of up to $25.0 million (of which only $17.0 million was initially registered for offer and sale). Under the Sales Agreement, Cantor may sell shares by any method permitted by law and deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act, as amended, including sales made directly on the NYSE MKT, on any other existing trading market for our common stock or to or through a market maker. The Company may instruct Cantor not to sell shares if the sales cannot be effected at or above the price designated by us from time to time. The Company is not obligated to make any sales of the shares under the Sales Agreement. The offering of shares pursuant to the Sales Agreement will terminate upon the earlier of (a) the sale of all of the shares subject to the Sales Agreement or (b) the termination of the Sales Agreement by Cantor or the Company, as permitted therein. Cantor will receive a

commission rate of 3.0% of the aggregate gross proceeds from each sale of shares and the Company has agreed to provide Cantor with customary indemnification and contribution rights. The Company will also reimburse Cantor for certain specified expenses in connection with entering into the Sales Agreement. On April 22, 2013, NYSE MKT approved the listing of 264,831 shares of our common stock in connection with the Sales Agreement. As of September 21, 2015, the registration statement previously filed with the SEC to facilitate the sale of registered shares of the Company's common stock under the Controlled Equity Offering expired. The Company filed a new registration statement with the SEC that was declared effective on January 19, 2016 to facilitate the sale of additional shares under the Controlled Equity Offering. Under the terms of the prospectus, the Company may sell up to $15,081,494 of the Company's common stock through the aforementioned Controlled Equity Offering. Pursuant to Instruction I.B.6 to Form S-3 (the Baby Shelf Rules), the Company may not sell more than the equivalent of one-third of its public float during any 12 consecutive months so long as the Company's public float is less than $75 million . During the three months ended March 31, 2016 , the Company sold 77,141 shares of common stock that resulted in net proceeds of $691,187 , of which $48,977 represented the recovery of deferred offering costs that had been incurred as of December 31, 2015 . At March 31, 2017 , the Company had $14.3 million available to be sold under the Sales Agreement.

Stock Options

In February 2005, the Company adopted an Equity Incentive Plan (the Plan). Pursuant to the Plan, a committee appointed by the Board of Directors may grant, at its discretion, qualified or nonqualified stock options, stock appreciation rights and may grant or sell restricted stock to key individuals, including employees, nonemployee directors, consultants and advisors. Option prices for qualified incentive stock options (which may only be granted to employees) issued under the plan may not be less than 100% of the fair value of the common stock on the date the option is granted (unless the option is granted to a person who, at the time of grant, owns more than 10% of the total combined voting power of all classes of stock of the Company; in which case the option price may not be less than 110% of the fair value of the common stock on the date the option is granted). Option prices for nonqualified stock options issued under the Plan are at the discretion of the committee and may be equal to, greater or less than fair value of the common stock on the date the option is granted. The options vest over periods determined by the Board of Directors and are exercisable no later than ten years from date of grant (unless they are qualified incentive stock options granted to a person owning more than 10% of the total combined voting power of all classes of stock of the Company, in which case the options are exercisable no later than five years from date of grant). Initially, the Company reserved 150,000 shares of common stock for issuance under the Plan, which was subsequently increased by the Company's shareholders to 300,000 shares. Options to purchase 156,415 common shares have been granted under the Plan and are outstanding as of March 31, 2017 . Additionally, 6,500 shares of restricted common stock have been granted to management and 1,000 shares of restricted common stock have been granted to members of the Company's Board of Directors under the Plan. This plan expired in January 2016.

On March 11, 2016, the Company's Board of Directors adopted the 2016 Equity Incentive Plan (the 2016 Plan) and reserved 250,000 shares of common stock for issuance under the 2016 Plan. The 2016 Plan was approved by the Company's stockholders at its 2016 Annual Meeting of Stockholders. During the three months ended March 31, 2017 , no equity compensation was granted by the Company.

The following table summarizes stock option activity for the Company during the three months ended March 31, 2017 :

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding December 31, 2016	162,665	$ 43.11	—	—
Granted	—	$ —	—	—
Exercised	—	$ —	—	—
Forfeited or expired	(6,250)	$ 40.80	—	—
Outstanding March 31, 2017	156,415	$ 43.21	6.3	$ —
Vested at March 31, 2017	105,445	$ 53.20	5.5	$ —

As of March 31, 2017 , the total unrecognized compensation cost related to unvested stock options amounted to $619,811 , which will be recognized over the weighted average remaining requisite service period of approximately 12 months .

On March 11, 2016, the Company issued an aggregate of 7,862 restricted stock units to certain officers and employees. The restricted stock units are outstanding as of March 31, 2017 and are subject to cliff vesting on March 10, 2018. For accounting purposes, these shares were valued at $13.20 , which was the stock price on the date of grant, and will be expensed over the service period of two years from the date of grant.

Warrants Accounted for As Equity

In connection with the January 2012 underwritten public offering, the Company issued to the investors warrants to purchase 118,618 shares of the Company's common stock at $56.40 per share. The warrants have a five -year term from the date of issuance. These warrants qualify for equity treatment since they do not have any provisions that would require the Company to redeem them for cash or that would result in an adjustment to the number of warrants. In January 2017, the remaining 35,454 warrants expired.

In connection with the October 2012 underwritten public offering, the Company issued to the investors warrants to purchase 112,500 shares of the Company's common stock at $106.00 per share. The warrants have a five -year term from the date of issuance. These warrants qualify for equity treatment since they do not have any provisions that would require the Company to redeem them for cash or that would result in an adjustment to the number of warrants. As of March 31, 2017 , warrants to purchase 111,119 shares of the Company's common stock remain outstanding relating to this public offering.

In connection with the August 2016 underwritten public offering, the Company issued pre-funded warrants to purchase 311,250 shares of common stock to certain investors. These pre-funded warrants were substantially paid for at the time of the offering, have a ten-year term and an exercise price of $0.40 per share. During 2016, pre-funded warrants to purchase 208,750 shares of common stock were exercised and pre-funded warrants to purchase 102,500 shares of common stock remain outstanding as of March 31, 2017. These pre-funded warrants qualify for equity treatment since they do not have any provisions that would require the Company to redeem them for cash or that would result in an adjustment to the number of warrants.

Warrants Accounted for As Liabilities

The Company's warrant liability is adjusted to fair value each reporting period and is influenced by several factors including the price of the Company's common stock as of the balance sheet date. On March 31, 2017 , the price per share of Company's common stock was $3.18 per share compared to $2.05 per share at December 31, 2016.

In connection with the February 2011 common stock private placement, the Company issued to the investors warrants to purchase 70,467 shares of the Company's common stock at $90.00 per share. The warrants have a term of five years and contained a provision whereby the warrant exercise price would be decreased in the event that certain future common stock issuances are made at a price less than $62.00 . Due to the potential variability of their exercise price, these warrants do not qualify for equity treatment, and therefore are recognized as a liability. As a result of the January 2012, October 2012, and February 2015 financings and shares sold through the Company's Controlled Equity Offering, the exercise price of the warrants was adjusted to $57.60 and the number of warrants was proportionately increased to 91,670 net of exercises. On February 24, 2016, the remaining warrants to purchase 91,670 shares of the Company's common stock expired.

In connection with the February 2015 underwritten public offering, the Company issued to the investors warrants to purchase 466,369 shares of the Company's common stock at $26.40 per share. The warrants have a term of five years and contain a provision whereby the warrant exercise price will be decreased in the event that certain future common stock issuances are made at a price less than $26.40 . Due to the potential variability of their exercise price, these warrants do not qualify for equity treatment, and therefore are recognized as a liability. During 2016, the exercise price of these warrants was adjusted to $20.00 to reflect the shares sold under the Company's controlled equity offering and the August 2016 public offering. The Company initially valued these warrants using a binomial lattice simulation model assuming (i) dividend yield of 0% ; (ii) expected volatility of 97.0% ; (iii) risk free rate of 1.53% and (iv) expected term of 5 years . Based upon these calculations, the Company calculated the initial valuation of the warrants to be $4,197,375 . As of March 31, 2016, the Company revalued these warrants using the binomial lattice simulation model and recorded a credit to other income of $481,011 . As of March 31, 2017 , the Company revalued the warrants using the binomial lattice simulation model assuming (i) dividend yield of 0% ; (ii) expected volatility of 66% ; (iii) risk free rate of 1.47% and (iv) expected term of 2.86 years and the Company recorded a credit to other income of $23,319 . As of March 31, 2017 , warrants to purchase 466,369 shares of the Company's common stock remain outstanding relating to this public offering and the carrying value of the warrant liability is $53,633 .

In connection with the August 2016 underwritten public offering, the Company issued to the investors warrants to purchase 993,115 shares of common stock with an initial exercise price of $7.68 per share. The warrants have a term five years and contain a provision whereby the warrant exercise price would be proportionately decreased in the event that future common stock issuances are made at a price less than $7.68 per share. Due to the potential variability of their exercise price, these warrants do not qualify for equity treatment, and therefore are recognized as a liability. These warrants are traded on the NYSE MKT (symbol IMUC.WS). The Company initially valued these warrants using the closing price on August 12, 2016 at $2.30 , which was the first day the warrants were traded on the NYSE MKT. Accordingly, the Company allocated $2,284,395 of the total proceeds from the August 2016 offering to the base warrants. As of March 31, 2017, warrants to purchase 993,115 shares of the Company's common stock remain outstanding and the warrants were valued using the last trading price of the quarter at $0.42 . Accordingly, the warrant liability was adjusted to $417,151 and the Company recorded a credit to other income of $79,457 .

Volatility has been estimated using the historical volatility of the Company's stock price.

The following reconciliation of the beginning and ending balances for all warrant liabilities measured at fair market value on a recurring basis during the three months ended March 31, 2017 and 2016 :

	March 31, 2017	March 31, 2016
Balance – January 1	$ 573,560	$ 1,958,775
Issuance of warrants and effect of repricing	—	14,636
Exercise of warrants	—	—
(Gain) or loss included in earnings	(102,776)	(481,011)
Balance – March 31	$ 470,784	$ 1,492,400

During the three months ended March 31, 2016 , the Company recorded a charge to financing expense of $14,636 to reflect the repricing of previously issued warrants **.**

7. California Institute of Regenerative Medicine Award

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 the Company's Phase 3 trial of ICT-107. The award originally provided for a $4 million project initial payment that was received during the fourth quarter of 2015, and up to $15.9 million in future milestone payments that are primarily dependent on patient randomization in the ICT-107 Phase 3 trial. In August 2016, the Company and CIRM modified the award such that the Company received an additional $1.5 million initial payment. The total amount of the award and other award conditions remain unchanged. Under the terms of the CIRM award, the Company is obligated to share future ICT-107 related revenue with CIRM. The percentage of revenue sharing is dependent on the amount of the award received by the Company and whether the revenue is from product sales or license fees. The maximum revenue sharing amount the Company may be required to pay to CIRM is equal to nine (9) times the total amount awarded and paid to the Company. The Company has the option to decline any and all amounts awarded by CIRM. As an alternative to revenue sharing, the Company has the option to convert the award to a loan, which such option the Company must exercise on or before ten (10) business days after the FDA notifies the Company that it has accepted the Company's application for marketing authorization. In the event the Company exercises it right to convert the award to a loan, it 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. Since the Company may be required to repay some or all of the amounts awarded by CIRM, the Company accounts for this award as a liability rather than revenue. If the Company were to lose this funding, it may be required to delay, postpone, or cancel its clinical trials or otherwise reduce or curtail its operations unless it is able to obtain adequate financing for its clinical trials from additional sources. In the event the Company were to terminate its ICT-107 trial, it would be obligated to return any unused funds to CIRM. As of March 31, 2017, the Company had approximately $400,000 of unused CIRM funds. For the three months ended March 31, 2017 and 2016 , the Company accrued interest of $452,659 and $264,827 , respectively.

8. 401(k) Profit Sharing Plan

During 2011, the Company adopted a Profit Sharing Plan that qualifies under Section 401(k) of the Internal Revenue Code. Contributions to the plan are at the Company's discretion. The Company did not make any matching contributions during the three months ended March 31, 2017 or March 31, 2016 .

9. Income Taxes

Deferred taxes represent the net tax effects of the temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes. Temporary differences result primarily from the recording of tax benefits of net operating loss carry forwards and stock-based compensation.

A valuation allowance is required if the weight of available evidence suggests it is more likely than not that some portion or all of the deferred tax asset will not be recognized. Accordingly, a valuation allowance has been established for the full amount of the deferred tax assets.

The Company's effective income tax rate differs from the amount computed by applying the federal statutory income tax rate to loss before income taxes as follows:

	March 31, 2017	March 31, 2016
Income tax benefit at the federal statutory rate	(34)%	(34)%
State income tax benefit, net of federal tax benefit	(6)%	(6)%
Change in fair value of warrant liability	1 %	3 %
Change in valuation allowance for deferred tax assets	32 %	37 %
Other	7 %	— %
Total	— %	— %

Deferred taxes consisted of the following:

	March 31, 2017	December 31, 2016
Net operating loss carryforwards	29,558,960	27,267,545
Stock-based compensation	2,668,095	3,090,903
Less valuation allowance	(32,227,055)	(30,358,448)
Net deferred tax asset	$ —	$ —

The valuation allowance increased by $1,868,607 and $2,439,142 during the three months ended March 31, 2017 and 2016 , respectively.

As of December 31, 2016 , the Company had federal and California income tax net operating loss carry forwards of approximately $68.2 million , and as of March 31, 2017 , management has estimated federal and California income tax net operating loss carry forwards of approximately $73.9 million . These net operating losses will begin to expire in taxable years 2027 through 2036 and 2017 through 2036 , respectively, unless previously utilized.

Section 382 of the Internal Revenue Code can limit the amount of net operating losses which may be utilized if certain changes to a company's ownership occur. As of March 31, 2017 , the Company has not experienced a change in ownership as defined by Section 382 of the Internal Revenue Code, based on a revised analysis completed by management. Management estimated that the Company has not incurred any limitations on its ability to utilize its net operating losses under Section 382 of the Internal Revenue Code as a result of its February 2015 and August 2016 financings.

During 2014, the Company licensed the non-U.S. rights to a significant portion of its intellectual property to its Bermuda-based subsidiary for approximately $11.0 million . The fair value of the intellectual property rights was determined by an independent third party. The proceeds from this sale represent a gain for U.S. tax purposes and are offset by current year losses and net operating loss carryforwards. However, the Internal Revenue Service, or the IRS, or the California Franchise Tax Board, or the CFTB, could challenge the valuation of the intellectual property rights and assess a greater valuation, which would require the Company to utilize a portion, or all, of its available net operating losses. If an IRS or a CFTB valuation

exceeds the available net operating losses, the Company would incur additional income taxes. The Company's ability to use its net operating losses is subject to the potential future limitations of IRS Section 382, as well as expiration of federal and state net operating loss carryforwards.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Throughout this Quarterly Report on Form 10-Q, the terms "we," "us," "our," and "our company" refer to ImmunoCellular Therapeutics, Ltd., a Delaware corporation and its subsidiaries.

Cautionary Statement Regarding Forward-Looking Statements

This Quarterly Report 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," "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 the heading "Risk Factors" in our Form 10-K for the year ended December 31, 2016 and in this quarterly report on Form 10-Q. The identification in this Quarterly Report 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.

Overview

ImmunoCellular Therapeutics, Ltd. and its subsidiaries (the Company) is a biotechnology company that is seeking to develop and commercialize new therapeutics to fight cancer using the immune system.

The Company has been primarily engaged in the acquisition of certain intellectual property, together with development of its product candidates and the recent clinical testing for its immunotherapy product candidates, and has not generated any recurring revenues. The phase 3 testing and continuation of our lead product candidate, ICT-107 is under strategic review and we have determined that if no partner is identified to fund or further develop this potential product, we expect to terminate further development if we are unable to otherwise obtain sufficient funding to continue the ongoing phase 3 trial. We also have announced a potential restructuring if ICT-107 is partnered or terminated, in which event the Company would consider focusing on its research programs, specifically, the development of certain Stem-to-T-cell immunotherapies for the treatment of cancer. The Company has incurred operating losses and, as of March 31, 2017 , the Company had an accumulated deficit of $102,048,429 . The Company expects to incur significant research, development and administrative expenses before any of its products can be launched and recurring revenues generated.

Critical Accounting Policies

Management's discussion and analysis of our financial condition and results of operations are based on our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, management evaluates its estimates, including those related to impairment of long-lived assets, including finite lived intangible assets, accrued liabilities, fair value of warrant derivatives and certain expenses. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates under different assumptions or conditions.

Our significant accounting policies are summarized in Note 2 of our condensed consolidated financial statements. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements:

Research and Development Costs

Although we believe that our research and development activities and underlying technologies have continuing value, the amount of future benefits to be derived from them is uncertain. Research and development costs are expensed as incurred. During the three months ended March 31, 2017 and 2016 , we recorded an expense of $ 4,685,720 and $4,737,575, respectively, related to research and development activities.

Stock-Based Compensation

Stock-based compensation expense is estimated as of the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which generally equals the vesting period, based on the number of awards that are expected to vest. Estimating the fair value for stock options requires judgment, including the expected term of our stock options, volatility of our stock, expected dividends, risk-free interest rates over the expected term of the options and the expected forfeiture rate. In connection with our performance based programs, we make assumptions principally related to the number of awards that are expected to vest after assessing the probability that certain performance criteria will be met.

Income Taxes

The Company accounts for federal and state income taxes under the liability method, with a deferred tax asset or liability determined based on the difference between the financial statement and tax basis of assets and liabilities, as measured by the enacted tax rates. The Company's provision for income taxes represents the amount of taxes currently payable, if any, plus the change in the amount of net deferred tax assets or liabilities. A valuation allowance is provided against net deferred tax assets if recoverability is uncertain on a more likely than not basis. The Company recognizes in its consolidated financial statements the impact of an uncertain tax position if the position will more likely than not be sustained upon examination by a taxing authority, based on the technical merits of the position. The Company's policy is to recognize interest related to unrecognized tax benefits as interest expense and penalties as operating expenses. The Company is not currently under examination by any taxing authority nor has it been notified of an impending examination. The Company's tax returns for the years ended December 31, 2013 to 2016, remain open for possible review.

California Institute of Regenerative Medicine

During 2015, the Company received an award from the California Institute of Regenerative Medicine (CIRM) of $19.9 million, of which $4 million was received by the Company during 2015, to partially fund the Company's Phase 3 trial of ICT-107. In August 2016, the Company and CIRM modified the award such that the Company received an additional $1.5 million initial payment. The total amount of the award and other conditions remain unchanged. Under the terms of the award, the Company is required to share future ICT-107 related revenue with CIRM. The percentage of revenue sharing is dependent on the amount of the award received by the Company and whether the revenue is from product sales or license fees. As an alternative to revenue sharing, the Company has the option to convert the award to a loan. In the event the Company exercises its right to convert the award to a loan, it will be obligated to repay the loan including interest at the rate of the three-month LIBOR rate (1.07% as of March 31, 2017) plus 25% per annum. Since the Company may be required to repay some or all of the amounts awarded by CIRM, the Company has accounted for this award as a liability rather than revenue. Additionally, the Company has accrued interest on the loan at the aforementioned rate. In the event the Company were to terminate its ICT-107 trial, it would be obligated to return any unused funds to CIRM. As of March 31, 2017, the Company had approximately $400,000 of unused CIRM funds.

Fair Value of Financial Instruments

The carrying amounts reported in the balance sheets for cash, cash equivalents, and accounts payable approximate their fair values due to their quick turnover. The fair value of warrant liability is estimated using the Binomial Lattice option valuation model.

Reverse Stock Split

On November 18, 2016, the Company effected a one-for-forty reverse stock split of its common stock through an amendment to its amended and restated certificate of incorporation (the "COI Amendment"). As of the effective time of the reverse stock split, every forty shares of the Company's issued and outstanding common stock were converted into one issued and outstanding share of common stock, without any change in par value per share. The reverse stock split affected all shares of the Company's common stock outstanding immediately prior to the effective time of the reverse stock split, as well as the number of shares of common stock available for issuance under the Company's equity incentive plans and outstanding warrants. No fractional shares were issued as a result of the reverse stock split. Stockholders who would otherwise have been entitled to receive a fractional share received cash payments in lieu thereof. In addition, the COI Amendment reduced the number of authorized shares of common stock to 25.0 million.

As the par value per share of the Company's common stock remained unchanged at $0.0001 per share, a total of $8,805 was reclassified from common stock to additional paid-in capital. All references to shares of common stock and per share data for all periods presented in the accompanying financial statements and notes thereto have been adjusted to reflect the reverse stock split on a retroactive basis.

Results of Operations

Three months ended March 31, 2017 and 2016

Net Loss

We incurred a net loss of $5,824,987 and $5,633,345 for the three months ended March 31, 2017 and 2016, respectively.

Revenues

We did not have any revenue during the three months ended March 31, 2017 and 2016 and we do not expect to have any revenue in 2017.

Expenses

Research and development expenses for the three months ended March 31, 2017 were $4,685,720 compared to $4,737,575 in the same period in 2016. During the quarter ended March 31, 2017 we incurred additional expenses related to the Phase 3 trial of ICT-107 as we increased the number of sites participating in the trial and as we treated more patients. As of March 31, 2017, we randomized a total of 23 patients, of which 9 were randomized during the quarter. During the quarter ended March 31, 2016, we incurred significant initial expenses with our North American and European cooperative groups for their support for ICT-107. Future payments to these organizations is dependent on patient enrollment. We also incurred additional expenses related to our Stem-to-T-cell immunotherapies. These increases were offset by significant reductions in expenses related to the wind down of the ICT-107 Phase 2 and ICT-121 trials. We expect expenses related to ICT-107 and our stem cell program to increase in future periods. Our ICT-140 program remains on hold until we obtain financing sufficient to complete the ICT-107 trial or find a partner for this program.

General and administrative expenses for the three months ended March 31, 2017 and 2016 were $793,178 and $1,099,832, respectively. The decrease was primarily due to lower professional fees and a reduction in compensation expense.

Liquidity and Capital Resources

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. We expect that we will not have enough cash resources to fund the business for the next 12 months and are reconsidering further development of ICT-107. Successful completion of our research and development activities, and our transition to attaining profitable operations, is dependent upon obtaining financing. 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 restructure our business and operations. These factors raise substantial doubt about our ability to continue as a going concern.

On September 18, 2015, we 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 an initial project payment in 2015 of $4 million and $15.9 million in future milestone payments that are primarily dependent on patient randomization. During the quarter ended September 30, 2016, the award was modified such that we received an additional $1.5 million in initial payment. The total amount of the award remains unchanged. 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 received by us 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 paid to us. 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. We may exercise

this loan conversion option until ten 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 business days of making the election including interest at the rate of the three-month LIBOR rate (1.07% as of March 31, 2017) plus 25% per annum. Since we may be required to repay some or all of the amounts awarded by CIRM, we account for this award as a liability rather than revenue and accrue interest at the aforementioned rate. In the event the Company were to terminate its ICT-107 trial, it would be obligated to return any unused funds to CIRM. As of March 31, 2017, the Company had approximately $400,000 of unused CIRM funds.

In August 2016, we entered into an underwriting agreement with Maxim Group LLC, pursuant to which we received net proceeds of approximately $6.6 million (after deducting the underwriting discount and offering expenses) from the initial sale of 863,750 shares of the Company's common stock, base warrants to purchase 881,250 shares of common stock at an

exercise price of $7.68 per share, and pre-funded warrants to purchase 311,250 shares of common stock at an exercise price of $0.40 per share. The underwriters partially exercised their option to purchase additional shares and warrants, and purchased an additional 37,500 shares of our common stock at a price of $6.00 per share and base warrants to purchase 111,965 shares of common stock at $0.40 per warrant. The pre-funded warrants have a term of ten years and the base warrants have a term of five years from the date of issuance. They also provide for a weighted average adjustment to the exercise price if we issue, or are deemed to issue, additional shares of common stock at a price per share less than the then effective price of the warrants, subject to certain exceptions. Accordingly, these warrants were accounted for as derivative liabilities and $2.2 million of the net proceeds was allocated to the warrant derivative. The pre-funded warrants were substantially paid for at the time of the offering and have an exercise price of $0.40 per share. Through December 31, 2016, 208,750 pre-funded warrants were exercised and resulted in proceeds to the Company of $83,500. We did not receive any additional proceeds from the exercise of the base warrants or pre-funded warrants during the most recent quarter.

On April 18, 2013, we entered into a Controlled Equity OfferingSM Sales Agreement (the Sales Agreement) with Cantor Fitzgerald & Co., as agent (Cantor), pursuant to which we may offer and sell, from time to time through Cantor, shares of our common stock having an aggregate offering price of up to $25.0 million (of which only $17.0 million was initially registered for offer and sale). Under the Sales Agreement, Cantor may sell shares by any method permitted by law and deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act, as amended, including sales made directly on the NYSE MKT, on any other existing trading market for our common stock or to or through a market maker. We may instruct Cantor not to sell shares if the sales cannot be effected at or above the price designated by us from time to time. We are not obligated to make any sales of the shares under the Sales Agreement. The offering of shares pursuant to the Sales Agreement will terminate upon the earlier of (a) the sale of all of the shares subject to the Sales Agreement or (b) the termination of the Sales Agreement by Cantor or the Company, as permitted therein. We will pay Cantor a commission rate of 3.0% of the aggregate gross proceeds from each sale of shares and have agreed to provide Cantor with customary indemnification and contribution rights. We will also reimburse Cantor for certain specified expenses in connection with entering into the Sales Agreement. On April 22, 2013, NYSE MKT approved the listing of 264,831 shares of our common stock in connection with the Sales Agreement. As of September 21, 2015, the registration statement previously filed with the SEC to facilitate the sale of registered shares of the Company's stock under the Controlled Equity Offering expired. The Company filed a new registration statement with the SEC that was declared effective on January 19, 2016 to facilitate the sale of additional shares under the Controlled Equity Offering. Under the terms of the prospectus, the Company may sell up to $15,081,494 of the Company's common stock through the aforementioned Controlled Equity Offering. Pursuant to Instruction I.B.6 to Form S-3 (the Baby Shelf Rules) the Company may not sell more than the equivalent of one-third of our public float during any 12 consecutive months so long as our public float is less than $75.0 million. During the year ended December 31, 2016, the Company sold 77,141 shares of our common stock under the Sales Agreement that resulted in net proceeds to the Company of approximately $691,187, of which $48,977 represented the recovery of deferred offering costs that had been incurred as of December 31, 2015. During the three months ended March 31, 2017, we did not sell any shares of our common stock under the Sales Agreement. As of March 31, 2017, the Company had approximately $14.3 million available to be sold under the Sales Agreement. Our ability to use this Controlled Equity Offering may be impacted as a result of the going concern opinion we received from our auditors. See additional discussion in Note 6 to the unaudited condensed consolidated financial statements that are included in this Form 10-Q.

We may also in the future seek to obtain funding through strategic alliances with larger pharmaceutical or biomedical companies. We cannot be sure that we will be able to obtain any additional funding from either financings or alliances, or that the terms under which we may be able to obtain such funding will be beneficial to us. If we are unsuccessful or only partly successful in our efforts to secure additional financing, we may find it necessary to suspend or terminate some or all of our product development and other activities.

As of March 31, 2017 , we had no long-term debt obligations, no capital lease obligations, or other similar long-term liabilities, other than the CIRM award liability. We have various purchase commitments for sponsored research, which are

generally cancelable upon 30 to 120 day notice, and license fees. We have no financial guarantees, debt or lease agreements or other arrangements that could trigger a requirement for an early payment or that could change the value of our assets, and we do not engage in trading activities involving non-exchange traded contracts.

We purchased in advance of the trial a significant portion of the supplies that will be used as part of the phase 3 trial of ICT-107 as we determined that it was more economical to purchase these supplies in bulk from the manufacturer. Accordingly, these supplies have been capitalized on the balance sheet with those supplies that are expected to be used during the next twelve months included in current assets and the remainder as non-current assets. Peptides and LPS make up the majority of the supplies that have been purchased in advance of the trial. These supplies will be expensed over the course of the trial as patients are enrolled and product is used.

Certain of the phase 3 ICT-107 vendors required deposits at the outset of the trial. Most vendors will use these deposits to offset invoices at the conclusion of the trial. Accordingly, these deposits are classified as non-current assets on the balance sheet. These deposits are refundable in the event the trial is terminated prior to its conclusion with the vendor applying the deposit against the costs of winding down the trial. If we were to determine to terminate further support of ICT-107, we would also have financial obligations to existing vendors and collaborators with respect to activities conducted in conjunction with the phase 3 clinical trial.

We may in the future seek to obtain funding through strategic alliances with larger pharmaceutical or biomedical companies. We cannot be sure that we will be able to obtain any additional funding from either financings or alliances, or that the terms under which we may be able to obtain such funding will be beneficial to us. If we are unsuccessful or only partly successful in our efforts to secure additional financing, we may find it necessary to suspend or terminate some or all of our product development and other activities.

Cash Flows

We used $ 6,070,357 of cash in our operations for the three months ended March 31, 2017, compared to $5,350,921 for the three months ended March 31, 2016. During the quarter ended March 31, 2017 we incurred additional expenses related to the Phase 3 trial of ICT-107 as we increased the number of sites participating in the trial and as we began treating patients. As of March 31, 2017, we randomized a total of 23 patients, of which 9 were randomized during the quarter. During the quarter ended March 31, 2016, we incurred significant initial expenses to our support organizations in the US and Europe for their support for ICT-107. Future payments to these organizations is dependent on patient enrollment. We also incurred additional expenses related to our Stem-to-T-cell immunotherapies. These increases were offset by significant reductions in expenses related to the wind down of the ICT-107 Phase 2 and ICT-121 trials. We expect expenses related to ICT-107 and our stem cell program to increase in future periods as we progress in the ICT-107 phase 3 trial and as we develop our stem cell immunotherapies. Our ICT-140 program remains on hold until we obtain financing sufficient to complete the ICT-107 trial or find a partner for this program. During the three months ended March 31, 2017, we used cash to pay down our accounts payable and accrued expenses.

During the three months ended March 31, 2017, we incurred $641,220 of non-cash expenses consisting of $ 452,659 of accrued interest on the CIRM award, $ 16,595 of depreciation and $ 171,966 of stock based compensation. We also recorded a non-cash credit of $ 102,776 related to the revaluation of our warrant derivatives. During the three months ended March 31, 2016, we incurred $527,268 of non-cash expenses consisting of $264,827 of accrued interest on the CIRM award, $20,370 of depreciation, $14,636 of financing expenses and $227,435 of stock based compensation. We also recorded a non-cash credit of $481,011 related to the revaluation of our warrant derivatives.

Inflation and changing prices have had no effect on our income or losses from operations over our two most recent fiscal years.

Off-Balance Sheet Arrangements

We are not party to any off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 4. Controls and Procedures

As of the end of the fiscal quarter covered by this report, we carried out an evaluation, under the supervision and with the participation of our principal executive officer and principal financial officer, regarding the effectiveness of the design and operation of our disclosure controls and procedures pursuant to SEC Rule 15d-15(b) of the Exchange Act. Based upon that evaluation, our principal executive officer and principal financial officer concluded that, as of March 31, 2017 , (i) our disclosure controls and procedures were effective to ensure that information that is required to be disclosed by us in reports that we file under the Exchange Act is recorded, processed, summarized and reported or submitted within the time period specified in the rules and forms of the SEC and (ii) our disclosure controls and procedures were effective to provide reasonable assurance that material information required to be disclosed by us in the reports we file or submit under the Exchange Act was accumulated and communicated to our management as appropriate to allow timely decisions regarding required disclosure. There were no changes in our internal control over financial reporting that occurred during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

We do not expect that our disclosure controls and procedures and internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurances that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our company have been detected. The design of any system of controls also is based in part upon assurance that any design will succeed in achieving its stated goals under all potential future conditions. However, controls may become inadequate because of changes in conditions or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

PART II
OTHER INFORMATION

Item 1. Legal Proceedings

On May 1, 2017, a purported securities class action lawsuit was filed in the United States District Court for the Central District of California, captioned *Arthur Kaye IRA FCC as Custodian DTD 6-8-00 v. ImmunoCellular Therapeutics, Ltd. et al* (Case No. 2:17-cv-03250) against ImmunoCellular Therapeutics, Ltd. (the "Company"), certain of its current and former officers and directors and others. The complaint asserts violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, and SEC Rule 10b-5 promulgated thereunder, related to allegedly materially false or misleading statements made between May 1, 2012 and December 11, 2013. The complaint alleges, among other things, that the Company failed to disclose that it purportedly paid for articles to be published about ICT-107. The plaintiff seeks an award of unspecified damages, prejudgment and post-judgment interest, as well as reasonable attorneys' fees, and other costs. The Company intends to vigorously defend against the claims. It is possible that similar lawsuits may yet be filed in the same or other courts that name the same or additional defendants.

Item 1A. Risk Factors

In evaluating our business, you should carefully consider the following risks in addition to the other information in this report. Any of the following risks could materially and adversely affect our business, results of operations, financial condition or your investment in our securities, and many are beyond our control. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also adversely affect our business.

Risks Relating to our Financial Position and Operations

We have a history of operating losses. We expect to continue to incur losses for the near future, and we may never become profitable.

With the exception of a one-time licensing fee payment that we previously received in connection with our entering into a research and license option agreement covering one of our monoclonal antibody product candidates with a third party who did not subsequently exercise that option, we have not generated any revenues and have incurred operating losses since our inception, and we expect to continue to incur operating losses for the foreseeable future. As of December 31, 2016, we had an accumulated deficit of $96.2 million. We do not have any products that generate revenue from commercial product sales. Our operating losses have resulted principally from costs incurred in pursuing our research and development programs, clinical

trials, manufacturing, and general and administrative expenses in support of operations. We may be unable to develop or market products in the future that will generate revenues, and any revenues generated may not be sufficient for us to become profitable. In the event that our operating losses are greater than anticipated or continue for longer than anticipated, we will need to raise significant additional capital sooner, or in greater amounts, than otherwise anticipated in order to be able to continue development of our present product candidates or future product candidates that we may develop and maintain our operations. There can be no assurances that capital will be available to us when and if we require additional capital on terms that are acceptable to us or favorable to our existing stockholders, or at all.

As our product candidates advance in clinical development, we will require significant additional funding, and our future access to capital is uncertain.

It is expensive to develop and commercialize cancer immunotherapy candidates and the study size requirements and costs for product candidates such as ICT-107 may not be feasible due to our inability to raise sufficient capital. For example, we estimate that the remaining external cost of completing our ICT-107 phase 3 clinical trial will be approximately $50 to $55 million. Our existing resources will not be sufficient for us to complete the phase 3 trial and our current award funding from CIRM will only result in $14.5 million of additional funding if we can timely and successfully achieve the enrollment milestones for reimbursement under the award. As a result, we expect that we will need to raise significant additional capital to achieve the interim results and to complete the trial if the interim results are positive. It is possible that we will not achieve the progress that we expect with respect to ICT-107 because the actual costs and timing of conducting a large phase 3 clinical trial are difficult to predict and are subject to substantial risks and delays. As we consider our financial resources and liquidity, we have announced that ICT-107 would not be further developed without a strategic partner, and we currently expect to either identify a potential partner or restructure our business and operations, including refocusing on our research programs. Any restructuring would involve significant near-term costs and potentially damage our reputation in the biotechnology and medical communities.

In any event, our product development efforts may not lead to commercial products, either because our product candidates fail to be found safe or effective in clinical trials or because we lack the necessary financial or other resources or relationships to pursue our programs through commercialization. Even if commercialized, a product may not achieve revenues that exceed the costs of producing and selling it. Our capital and future cash flow may not be sufficient to support the expenses of our operations and we may need to raise additional capital depending on a number of factors, including the following:

- the need to conduct larger, more expensive and longer clinical trials to obtain the data necessary for submission for product approval to regulatory agencies;
- the capability to manufacture product at the scale and quantities required to meet regulatory approval requirements and the development and commercial requirements for the product;
- the costs to obtain qualified commercial development of infrastructure and activities related to the commercialization of our products;
- the rate of progress and cost of our research and development and clinical trial activities; and
- the introduction into the marketplace of competing products and other adverse market developments.

As of May 15, 2017, we had approximately $14.3 million available for offer and sale pursuant to our Sales Agreement with Cantor Fitzgerald & Co., as agent. Sales under our Sales Agreement are registered on a registration statement on Form S-3. Pursuant to Instruction I.B.6 to Form S-3, we may not sell more than the equivalent of one-third of our public float during any 12 consecutive months so long as our public float is less than $75 million, which will limit our ability to raise funds using our Sales Agreement. Other than our Sales Agreement and our award from CIRM, we currently do not have arrangements to obtain additional financing. Any such financing could be difficult to obtain on favorable terms or at all. If we are unable to raise additional funds, we may have to delay, reduce or eliminate some of our clinical trials and our development programs. Even if we raise additional funds by issuing equity or equity-linked securities, such financings may only be available on unattractive terms and, in such event, the market price of our common stock may decline and further dilution to our existing stockholders will result. In addition, the expectation of future dilution as a result of our offering of securities convertible into equity securities may cause our stock price to decline.

We may seek Small Business Innovation Research or other government grants to conduct a portion of our planned research and development work in addition to certain equity financing. Except for one grant awarded under a federal tax credit/grant program for pharmaceutical research and development companies in 2010 and one grant application submitted under the

Orphan Drug Act that was denied, we have not yet submitted any requests for these grants. The competition for obtaining these grants is intense and we may be unable to secure any grant funding on a timely basis or at all.

Our future capital needs are uncertain and our independent registered public accounting firm has expressed in its report on our 2016 audited financial statements a substantial doubt about our ability to continue as a going concern. Our ability to continue as a going concern is dependent on our ability to raise additional capital or obtain loans from financial institutions and our operations could be curtailed if we are unable to obtain the required additional funding when needed. We may not be able to do so when necessary, and/or the terms of any financings may not be advantageous to us.

Our financial statements for the year ended December 31, 2016 included in Item 8 of this Annual Report on Form 10K have been prepared assuming we will continue to operate as a going concern. However, due to our ongoing operating losses, negative cash flows from operations, our need to finance to continue our ongoing clinical trials and conduct research and our accumulated deficit, there is substantial doubt about our ability to continue as a going concern. Because we continue to experience net operating losses, our ability to continue as a going concern is subject to our ability to obtain necessary funding from outside sources, including obtaining additional funding from the sale of our securities, grants or other forms of financing. Our continued net operating losses increase the difficulty in completing such sales or securing alternative sources of funding, and there can be no assurances that we will be able to obtain such funding on favorable terms or at all. If we are unable to obtain sufficient financing from the sale of our securities or from alternative sources, we may be required to reduce, defer or discontinue certain of our clinical development, research and operating activities or we may not be able to continue as a going concern. As a result, our independent registered public accounting firm has expressed in its auditors' report on the financial statements included in Item 8 of this Annual Report a substantial doubt regarding our ability to continue as a going concern. Our financial statements do not include any adjustments that might result from the outcome of the uncertainty regarding our ability to continue as a going concern. If we cannot continue as a going concern, our stockholders may lose their entire investment in the common stock. Future reports from our independent registered public accounting firm may also contain statements expressing doubt about our ability to continue as a going concern.

We are required to pay certain royalties under our license agreements with third party licensors, and we must meet certain milestones to maintain our license rights.

Under our license agreements with academic institutions generally, including our Cedars-Sinai license for ICT-107, we will be required to pay substantial royalties to that institution based on our revenues from sales of our products utilizing the technologies and products licensed from the institution, and these royalty payments could adversely affect the overall profitability for us of any products that we may seek to commercialize. In order to maintain our license rights under these license agreements, we will need to meet certain specified milestones, subject to certain cure provisions, in the development of our vaccine product candidates and in the raising of funding. In addition, many of these agreements contain diligence milestones and we may not be successful in meeting all of the milestones in the future on a timely basis or at all. We will need to outsource and rely on third parties for many aspects of the clinical development, manufacture, sales and marketing of our products covered under our license agreements, including the Cedars-Sinai license for ICT-107. Delay or failure by these third parties could adversely affect the continuation of our license agreements with their party licensors.

Risks Related To Our Business

We are a pre-revenue stage company subject to all of the risks and uncertainties of a biotechnology business, including the risk that we may never successfully develop any products or generate revenues.

We are a pre-revenue stage company with research and development activity based on two products in clinical development, and we have determined that we would not further develop ICT-107, our lead product candidate, without a partner or other alternative to fund the development of ICT-107. If we are unable to identify a partner or other alternative to fund ICT-107, we will consider restructuring our business as soon as practicable. We may be unable to successfully develop or market any of our current or proposed product candidates, those product candidates may not generate any revenues, and any revenues generated may not be sufficient for us to become profitable or thereafter maintain profitability. We have not generated any recurring revenues to date, and we do not expect to generate any such revenues for a number of years.

Our cell-based vaccine technologies are our primary platform technologies, and our commercial prospects will be heavily dependent on the outcome of regulatory requirements and any future clinical trials for our lead vaccine product candidate, ICT-107. We have only seven full-time employees and two part-time employees, have limited resources and may not possess the ability to successfully overcome many of the risks and uncertainties frequently encountered by early stage companies involved in the new and rapidly evolving field of biotechnology in general and cancer immunotherapies in particular. You must consider that we may not be able to:

- obtain additional financial resources and meet milestones under award funding necessary to develop, test, manufacture and market our vaccine product candidates, in particular ICT-107;

- engage corporate partners to assist in developing, funding, testing, manufacturing and marketing our vaccine product candidates or any future product candidates that we may develop;

- satisfy the regulatory requirements for acceptable pre-clinical and clinical trial studies or to timely enroll patients;

- establish and demonstrate or satisfactorily complete the research to demonstrate at various stages the pre-clinical and clinical efficacy and safety of our vaccine product candidates or any future product candidates that we may develop;

- apply for and obtain the necessary regulatory approvals from the FDA and the appropriate foreign regulatory agencies;

- market our vaccine product candidates or any future product candidates that we may develop to achieve acceptance and use by the medical community and patients in general and produce revenues; and

- attract and retain, on acceptable terms, qualified technical, commercial and administrative staff for the continued development and growth of our business.

Our current product candidates and any future product candidates that we may develop will be based on novel technologies and the development, manufacture and regulatory approval for such products are inherently risky.

We are subject to the risks of failure inherent in the development of products based on new technologies. The novel nature of our therapies creates significant challenges in regard to product development and optimization, manufacturing, government regulation, third-party reimbursement and market acceptance. For example, the FDA may have limited experience with dendritic cell-based therapeutics and, with the exception of one dendritic cell-based vaccine for the treatment of prostate cancer, has not yet approved any of these therapeutics for marketing, and the pathway to regulatory approval for our vaccine product candidates or any future vaccine product candidates may accordingly be more uncertain, complex and lengthy than the pathway for new conventional drugs. The targeting of cancer stem cells as a potential therapy is a recent development that may not become broadly accepted by scientists, physicians, pharmaceutical companies or the FDA. In addition, the manufacture of biological products, including dendritic cell-based vaccines, could be more complex and difficult, and therefore, these potential challenges may prevent us from developing and commercializing products on a timely or profitable basis or at all.

We may elect to delay or discontinue preclinical studies or clinical trials based on unfavorable results or lack of financial resources. Any product candidate using a cellular therapeutic technology may fail to:

- survive and persist in the desired location;

- provide the intended therapeutic benefits;

- properly integrate into existing tissue in the desired manner; or

- achieve therapeutic benefits equal to or better than the standard of treatment at the time of testing.

In addition, our product candidates may cause undesirable side effects. Results of preclinical research with our vaccine product candidates or any other or future product candidates that we may develop or clinical results with formulations used in earlier trials that are similar but not identical to our product candidate formulations may not be indicative of the results that will be obtained in later stages of preclinical or clinical research on our product candidates. In particular, the results generated in our phase 2 trial of ICT-107 may not be indicative of the results that we might obtain in further phase 3 testing of ICT-107.

If regulatory authorities do not approve our products or if we fail to maintain regulatory compliance, we would be unable to commercialize our products, and our business and results of operations would be harmed. Furthermore, because cancer stem cell and dendritic cell-based products represent new forms of therapy, the marketplace may not accept any products we may develop that utilize these technologies. If we do succeed in developing products, we will face many potential obstacles, such as the need to obtain regulatory approvals and to develop or obtain manufacturing, marketing and distribution capabilities. In addition, we will face substantial additional risks, such as product liability claims.

Because of the early stage of development of our vaccine product candidates, we do not know if we will be able to generate data that will support the filing of a biologics license application for these product candidates or the FDA's approval thereof. Any of our investigational new drug applications (INDs) may be placed on clinical hold by the FDA at any time, which would delay clinical development until underlying safety concerns are resolved to the FDA's satisfaction. If we experience substantial delays, we may not have the financial resources to continue development of these product candidates or the development of any of our other or future product candidates that we may develop. Delays in clinical trials could reduce the commercial viability of our vaccine product candidates and any other or future product candidates that we may develop. Delays in patient enrollment may be caused by a number of factors, including patient reluctance to participate in blinded trials where the patient is not assured of receiving the treatment being tested in the trial. Even if we successfully develop and gain regulatory approval for our products, we still may not generate sufficient or sustainable revenues or we may not become profitable, which could have a material adverse effect on our ability to continue our marketing and distribution efforts, research and development programs and operations.

If we encounter difficulties enrolling patients in our clinical trials, our trials could be delayed or otherwise adversely affected.

Clinical trials for our product candidates require that we identify and enroll a large number of patients with the disease under investigation. We may not be able to enroll a sufficient number of patients, or those with required or desired characteristics to achieve diversity in a study, to complete our clinical trials in a timely manner. We have in the past experienced some difficulty in enrollment in our clinical trials due to the criteria specified for eligibility for these trials, and we may encounter these difficulties in our ongoing clinical trials for our product candidates. The early enrollment experience in the ICT-107 phase 3 trial indicated that we needed to make modifications in the trial protocol to accelerate enrollment. We submitted a protocol amendment to FDA on December 30, 2016 that modifies some elements of how patients qualify for the trial, raises the target number of randomized patients to 542, and extends completion of the trial to mid-2021. The amendment was allowed by the FDA in March 2017. The Company has submitted similar protocol amendments to regulatory agencies in Canada and the European countries participating in the trial. In addition, with respect to ICT-107, we receive award funding based on reimbursement of amounts expended depending upon patient initiation in our ongoing phase 3 clinical trial and any delays in enrollment would negatively impact our cash flow and ability to finance our operations.

Patient enrollment is affected by factors including:

- design of the trial protocol;
- the size of the patient population;
- eligibility criteria for the study in question;
- perceived risks and benefits of the product candidate under study;
- availability of competing therapies and clinical trials;
- efforts to facilitate enrollment in clinical trials;
- our ability to successfully apherese and manufacture ICT-107 and placebo for trial participants in a timely and cost-effective manner;
- the ability to monitor patients adequately during and after treatment; and
- proximity and availability of clinical trial sites for prospective patients.

If we have difficulty enrolling a sufficient number or diversity of patients to conduct our clinical trials as planned, we may need to delay or terminate ongoing or planned clinical trials, either of which would have a negative effect on our business. For example, we originally projected that we would complete enrollment of our ICT-107 phase 3 study by the end of 2017, with interim results at that time and six months thereafter. With the enrollment experience to date in the trial and a knowledge of likely modifications to the protocol, if the Company continues the development of ICT-107, we now think the completion of enrollment will be delayed potentially by 12 to 18 months from original estimates. There can be no assurance that we will timely achieve these revised goals, that we will receive awards under our agreement with CIRM or that we will have sufficient funding to obtain these results or that the results will be favorable.

Before we can market our vaccine product candidates or any other or future product candidates that we may develop, we must obtain governmental approval for each of these product candidates, the application and receipt of which is time-consuming, costly and uncertain.

Our current product candidates and any future product candidates that we will be developing will require approval of the FDA before they can be marketed in the U.S. Although our focus at this time is primarily on the U.S. market, in the future similar approvals will need to be obtained from foreign regulatory agencies before we can market our current and proposed product candidates in other countries. The process for filing and obtaining FDA approval to market therapeutic products is both time-consuming and costly, with no certainty of a successful outcome. The historical failure rate for companies seeking to obtain FDA approval of therapeutic products, particularly vaccines for cancer, is high and, with the exception of Dendreon Corporation's (acquired in January 2017 from Valeant Pharmaceuticals by Sunpower Group Ltd.) antigen presenting cell vaccine for the treatment of prostate cancer, no cell-based cancer vaccine has to date been approved by the FDA. This process includes conducting extensive pre-clinical research and clinical testing, which may take longer and cost more than we initially anticipate due to numerous factors, including without limitation, difficulty in securing appropriate centers to conduct trials, difficulty in enrolling patients in conformity with required protocols in a timely manner, unexpected adverse reactions by patients in the trials to our proposed product candidates and changes in the FDA's requirements for our testing during the course of that testing.

We have only enrolled a limited number of patients in our ICT-121 phase 1 trial and we may encounter unexpected and adverse immune responses or other side effects in the patients whom we test with this product candidate.

The time required to obtain FDA and other approvals is unpredictable but often can exceed five years following the commencement of clinical trials, depending upon the complexity of the product and other factors.

Any analysis we perform on data from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unexpected delays or increased costs due to a variety of reasons, including new government regulations from future legislation or administrative action, or from changes in FDA policy during the period of product development, clinical trials and FDA regulatory review.

Failure to timely and successfully complete clinical trials, show that our products are safe and effective and timely file and receive approval of our biologics license applications would have a material adverse effect on our business and results of operations. Even if approved, the labeling approved by the relevant regulatory authority for a product may restrict to whom we and our potential partners may market the product or in the manner in which our product may be administered, which could significantly limit the commercial opportunity for such product.

Prior to granting product approval, the FDA must determine that our third party contractors' manufacturing facilities meet current good manufacturing practice (GMP) requirements before we can use them in the commercial manufacture of our products. We and all of our contract manufacturers are required to comply with the applicable GMP current regulations. Manufacturers of biologics must also comply with the FDA's general biological product standards. Failure to comply with the statutory and regulatory requirements subjects the manufacturer to possible legal or regulatory action, such as suspension of manufacturing, seizure of product or voluntary recall of a product. GMP regulations require quality control and quality assurance as well as the corresponding maintenance of records and documentation sufficient to ensure the quality of the approved product.

Certain of our current product candidates may not be eligible for Orphan Drug status.

Regulatory authorities in the United States and Europe may designate drugs for relatively small patient populations as orphan drugs. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process, but does make the product eligible for orphan drug exclusivity, reduced filing fees and specific tax credits. Generally, if a company receives the first marketing approval for a product with an orphan drug designation in the clinical indication for which it has such designation, the product is entitled to orphan drug exclusivity. Orphan drug exclusivity in the United States means that the FDA will not approve another application to market the same drug for the same indication, except in limited circumstances, for a period of seven years in the United States. This exclusivity, however, could block the approval of our proposed product candidates if a competitor obtains marketing approval before us. In Europe, orphan drug exclusivity means that we will have market exclusivity for ten years. We have obtained orphan drug status in the United States and Europe for ICT-107 to treat GBM and may also seek this status for ICT-140 to treat ovarian cancer and for ICT-121 to treat recurrent GBM if we meet the eligibility criteria. However, even if we obtain orphan drug exclusivity for any of our proposed product candidates, we may not be able to maintain it. For example, if a competitive product is shown to be clinically superior to our product, any orphan drug exclusivity we have will not block the approval of such competitive product.

Because our current and our other future potential product candidates will represent novel approaches to the treatment of disease, there are many uncertainties regarding the development, manufacturing, market acceptance, third-party reimbursement coverage and commercial potential of our product candidates.

The approaches offered by our current product candidates or any future product candidates that we may develop may not gain broad acceptance among doctors or patients and governmental agencies or third-party medical insurers may not be willing to provide reimbursement coverage for proposed product candidates. Moreover, we do not have internal marketing data research resources and are not certain of and have not attempted to independently verify the potential size of the commercial markets for our current product candidates or any future product candidates that we may develop. Since our current product candidates and any future product candidates that we may develop will represent new approaches to treating various conditions, it may be difficult, in any event, to accurately estimate the potential revenues from these product candidates. We may spend large amounts of money trying to obtain approval for these product candidates, and never succeed in doing so. In addition, these product candidates may not demonstrate in large sets of patients the pharmacological properties ascribed to them in the laboratory studies or smaller groups of patients, and they may interact with human biological systems in unforeseen, ineffective or even harmful ways either before or after they are approved to be marketed. We have not yet manufactured our product on a commercial scale and may not be able to achieve manufacturing efficiencies relative to our competitors. We have experienced lot contamination or potential contaminations in our manufacturing process for clinical supplies that have been resolved with only minor delays to ongoing manufacturing. However, there can be no guarantee that we will not continue to experience contaminations in the future and therefore potential delays or interruptions in manufacturing. We do not yet have sufficient information to reliably estimate what it will cost to commercially manufacture our current product candidates or any future product candidates that we may develop, and the actual cost to manufacture these products could materially and adversely affect the commercial viability of these products. Certain of our cell-based vaccine product candidates may be formulated with cells harvested and processed from individual target patients, which could limit the total patient population for these vaccines and could require complex and costly manufacturing processes to produce these vaccines on a commercial basis. As a result, we may never succeed in developing a marketable product. If we do not successfully develop and commercialize products based upon our approach, we will not become profitable, which would materially and adversely affect the value of our common stock. Finally, in order to have commercially viable markets for our products, we will need to obtain an adequate level of reimbursement by third party payors for our products.

The commercial success of our product candidates will depend upon the degree of market acceptance by physicians, patients, healthcare payors and others in the medical community.

Any product that we bring to market may not gain or maintain market acceptance by governmental purchasers, group purchasing organizations, physicians, patients, healthcare payors and others in the medical community. If any products that we develop do not achieve an adequate level of acceptance, we may not generate sufficient revenues to support continued commercialization of these products. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the perceived safety and efficacy of our products;
- the prevalence and severity of any side effects;
- our ability to gain access to the entire market through distributor arrangements;
- the willingness of the target patient population to try new products and of physicians to prescribe our products;
- the effectiveness of our marketing strategy and distribution support;
- the timing of our receipt of any marketing approvals, the terms of any approvals and the countries in which approvals are obtained;
- the availability of government and third-party payor reimbursement;
- the pricing of our product candidates, particularly as compared to alternative treatments; and
- the availability of alternative effective forms of treatments, at that time, for the diseases that the product candidates we are developing are intended to treat.

Adverse publicity regarding cellular therapies could impact our business.

Although we are not utilizing embryonic stem cells, adverse publicity due to the ethical and social controversies surrounding the use of such cells or any adverse reported side effects from any stem cell, dendritic or other cell therapy clinical trials or to the failure of such trials to demonstrate that these therapies are efficacious could materially and adversely affect our ability to raise capital or recruit managerial or scientific personnel or obtain research grants.

As an early stage small company that will be competing against numerous large, established companies that have substantially greater financial, technical, manufacturing, marketing, distribution and other resources than we have, we will be at a significant competitive disadvantage.

The pharmaceutical and biopharmaceutical industry is characterized by intense competition and rapid and significant technological changes and advancements. Many companies, research institutions and universities are doing research and development work in a number of areas similar to those that we focus on that could lead to the development of new products which could compete with and be superior to our product candidates.

Most of the companies with which we compete have substantially greater financial, technical, research, manufacturing, marketing, distribution and other resources than those of ours. A number of these companies may have or may develop technologies for developing products for treating various diseases, including brain cancers, which could prove to be superior to ours. We expect technological developments in the pharmaceutical and biopharmaceutical and related fields to occur at a rapid rate, and we believe competition will intensify as advances in these fields are made. Accordingly, we will be required to continue to devote substantial resources and efforts to research and development activities in order to potentially achieve and maintain a competitive position in this field. Products that we develop may become obsolete before we are able to market them or to recover all or any portion of our research and development expenses. We will be competing with respect to our products with companies that have significantly more experience and expertise in undertaking preclinical testing and human clinical trials with new or improved therapeutic products and obtaining regulatory approvals of such products. A number of these companies already market and may be in advanced phases of clinical testing of various drugs that will or may compete with our current product candidates or other future potential product candidates. Our competitors may develop or commercialize products more rapidly than we do or with significant advantages over any products we develop. Our competitors may therefore be more successful in commercializing their products than us, which could adversely affect our competitive position and business.

In addition to sipuleucel-T and ipilimumab, which have been approved for sale by the FDA, several major biopharmaceutical companies, including Genentech, Inc. (a member of the Roche Group), Amgen Inc., Merck & Co., Inc., Novartis AG, GlaxoSmithKline plc, Celgene Corporation and Bristol-Myers Squibb Company (BMS), smaller biotechnology companies, such as Oncothyreon Inc., Galena Biopharma, Inc., Agenus Inc., Bavarian Nordic A/S, Kite Pharma, Inc., Juno Therapeutics, Inc. and Immunovaccine Inc., are developing cancer immunotherapies. A number of immunotherapy companies, including Northwest Biotherapeutics, Inc., Prima Biomed Ltd and DCPrime B.V., also utilize DCs for their therapeutic cancer vaccines.

Several companies are developing immunotherapies to treat newly diagnosed GBM. For example, Northwest Biotherapeutics is conducting a phase 3 study with DCVax, a DC-based tumor lysate vaccine. Agenus Inc. has recently completed a phase 2 clinical trial with its heat shock protein and tumor-derived peptide vaccine (HSPPC-96). BMS has recently launched two late stage trials to test their checkpoint inhibitor antibody, nivolumab, in both unmethylated MGMT and methylated MGMT newly diagnosed glioblastoma patients. Nivolumab is already approved by FDA and other regulators to treat other types of cancers.

In addition to the previously mentioned companies developing cancer immunotherapies, there are also several pharmaceutical companies, including OncoMed Pharmaceuticals, Inc., Verastem, Inc., Stemline Therapeutics, Inc. and Infinity Pharmaceuticals, Inc., that are pursuing drugs that target CSCs. Stemline is currently developing a peptide treatment, SL-701, for brain cancer.

In addition, in October 2015 Novocure received regulatory approval to market its Optune™ device in the U.S. for the treatment of newly diagnosed glioblastoma. The device delivers low-intensity, intermediate frequency, alternating electric currents to the brain. The adoption of this device could impact the speed of the ICT-107 phase 3 enrollment and its potential market should ICT-107 ultimately receive regulatory approval.

Colleges, universities, governmental agencies, and other public and private research organizations are becoming more active in seeking patent protection and licensing arrangements to collect royalties for use of technologies that they have developed, some of which may directly compete with our product candidates or any future product candidates that we may develop. Governments of a number of foreign countries are aggressively investing in cellular therapy research and promoting

such research by public and private institutions within those countries. Domestic and foreign institutions and governmental agencies, along with pharmaceutical and specialized biotechnology companies, can be expected to compete with us in recruiting qualified scientific personnel.

Our competitive position will be significantly impacted by the following factors, among others:

- our ability to obtain U.S. and foreign marketing approvals for our product candidates on a timely basis;
- the level of acceptance of our products by physicians, compared to those of competing products or therapies;
- our ability to have our products manufactured on a commercial scale;
- the effectiveness of sales and marketing efforts on behalf of our products;
- our ability to meet demand for our products;
- our ability to secure insurance reimbursement for our products;
- the price of our products relative to competing products or therapies;
- our ability to enter into collaborations with third parties to market our products;
- our ability to recruit and retain appropriate management and scientific personnel; and
- our ability to develop a commercial-scale research and development, manufacturing and marketing infrastructure, either on our own or with one or more future strategic partners.

The market success of our current product candidates and any future product candidates that we may develop will be dependent in part upon third-party reimbursement policies that will not be established for our product candidates until we are closer to receiving approval to market.

Our ability to successfully commercialize and penetrate the market for our current product candidates and any future product candidates that we may develop is likely to depend significantly on the availability of reimbursement for our lead product candidate or any other or future product candidates that we may develop from third-party payors, such as governmental agencies, private insurers and private health plans. Even if we are successful in bringing a proposed product candidate to the market, these product candidates may not be considered cost-effective, and the amount reimbursed for our products may be insufficient to allow us to sell any of our products on a competitive basis. We cannot predict whether levels of reimbursement for our product candidates, if any, will be high enough to allow the price of our product candidates to include a reasonable profit margin. Even with FDA approval, third-party payors may deny reimbursement if the payor determines that our particular product candidates are unnecessary, inappropriate or not cost effective. If patients are not entitled to receive reimbursements similar to reimbursements for competing products which currently are reimbursable, they may be unwilling to use our product candidates since they will have to pay for the unreimbursed amounts. The reimbursement status of newly approved health care products is highly uncertain. If levels of reimbursement are decreased in the future, the demand for our lead product candidate and any future product candidates that we may develop could diminish or our ability to sell our products on a profitable basis could be adversely affected.

We believe that the efforts of governments and third-party payors to contain or reduce the cost of healthcare will continue to affect the business and financial condition of pharmaceutical and biopharmaceutical companies. Comprehensive health care reform legislation that was enacted in 2010 could adversely affect our business and financial condition. Among other provisions, the legislation provides that a biosimilar product may be approved by the FDA on the basis of analytical tests and certain clinical studies demonstrating that such product is highly similar to an existing, approved product and that switching between an existing product and the biosimilar product will not result in diminished safety or efficacy. This abbreviated regulatory approval process may result in increased competition if we are able to bring a biopharmaceutical product to market. The legislation also includes more stringent compliance programs for companies in various sectors of the life sciences industry with which we may need to comply and enhanced penalties for non-compliance with the new health care regulations. Complying with new regulations may divert management resources, and inadvertent failure to comply with new regulations may result in penalties being imposed on us.

A number of legislative and regulatory proposals to change the healthcare system in the United States and other major healthcare markets have been proposed at the state and federal levels in recent years. These proposals have included prescription drug benefit legislation recently enacted in the United States and healthcare reform legislation recently enacted by certain states. Further federal and state legislative and regulatory developments are likely, and we expect ongoing initiatives in the United States to increase pressure on drug pricing. Such reforms could have an adverse effect on anticipated revenues from any products that we may successfully develop.

We may be subject to product liability and other claims that could have a material negative effect on our operations and on our financial condition.

The development and sale of pharmaceutical products in general, and vaccines in particular, expose us to the risk of significant damages from product liability and other claims. Product liability claims could delay or prevent completion of our clinical development programs. If we succeed in marketing our current lead product candidates or any future product candidates that we may develop, such claims could result in an FDA investigation of the safety and effectiveness of our products or our marketing programs, and potentially a recall of our products or more serious enforcement action, or limitations on the indications for which they may be used, or suspension or withdrawal of approval. We plan to obtain and maintain product liability insurance for coverage of our clinical trial activities and obtained this coverage for the recently completed and current clinical trials of our dendritic cell-based vaccine product candidate. We may not be able to secure such insurance in the amounts we are seeking or at all for any of the future trials for our current product candidates or any future product candidates that we may develop. We intend to obtain coverage for our products when they enter the marketplace (as well as requiring the manufacturers of our products to maintain insurance), but we do not know if insurance will be available to us at acceptable costs or at all. The costs for many forms of liability insurance have risen substantially in recent years and the costs for insuring a vaccine type product may be higher than other pharmaceutical products, and such costs may continue to increase in the future, which could materially impact our costs for clinical or product liability insurance. If the cost is too high, we will have to self-insure, and we may have inadequate financial resources to pay the costs of any claims. A successful claim in excess of our product liability coverage could have a material adverse effect on our business, financial condition and results of operations.

We and certain of our current and former officers and directors and others have been named as defendants in a purported securities class action lawsuit. This, and potential similar or related litigation, could result in substantial damages and may divert management's time and attention from our business.

Securities-related class action and shareholder derivative litigation has often been brought against companies, including many biotechnology companies, which experience volatility in the market price of their securities. This risk is especially relevant for us because biotechnology and biopharmaceutical companies often experience significant stock price volatility in connection with their product development programs.

On May 1, 2017, a purported securities class action lawsuit was filed in the United States District Court for the Central District of California, captioned *Arthur Kaye IRA FCC as Custodian DTD 6-8-00 v. ImmunoCellular Therapeutics, Ltd. et al* (Case No. 2:17-cv-03250) against the Company, certain of its current and former officers and directors and others. The complaint asserts violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, and SEC Rule 10b-5 promulgated thereunder, related to allegedly materially false or misleading statements made between May 1, 2012 and December 11, 2013. The complaint alleges, among other things, that the Company failed to disclose that it purportedly paid for articles to be published about ICT-107. The plaintiff seeks an award of unspecified damages, prejudgment and post-judgment interest, as well as reasonable attorneys' fees, and other costs.

This lawsuit and any other potential related lawsuits are subject to inherent uncertainties, and the actual cost will depend upon many unknown factors. The outcome of the litigation is necessarily uncertain, we could be forced to expend significant resources in the defense of these suits and we may not prevail. Monitoring and defending against legal actions is time-consuming for our management and detracts from our ability to fully focus our internal resources on our business activities. In addition, we may incur substantial legal fees and costs in connection with the litigation. We are not currently able to estimate the possible cost to us from these matters, as the lawsuit is currently at an early stage and we cannot be certain how long it may take to resolve these matters or the possible amount of any damages that we may be required to pay. We have not established any reserves for any potential liability relating to this lawsuit. It is possible that we could, in the future, incur judgments or enter into settlements of claims for monetary damages. A decision adverse to our interests on this action could result in the payment of substantial damages, or possibly fines, and could have a material adverse effect on our cash flow, results of operations and financial position. In addition, the uncertainty of the currently pending litigation could lead to more volatility in our stock price.

We are dependent on our key personnel, and the loss of one or more of our key personnel would materially and adversely affect our business and prospects.

We are dependent on our officers and directors for their scientific or managerial skills. Except for our President and Chief Executive Officer and our Senior Vice President - Research, we do not have any full-time executive management personnel. We do not currently maintain key man life insurance on any of our scientific or management team. All of our full-time executive management personnel can terminate their services to us at any time. The loss of any of these individuals would materially and adversely affect our business.

As we retain additional full-time or part-time senior personnel necessary to further our advanced development of product candidates, our expenses for salaries and related items will increase materially from current levels. Competition for such personnel is intense, and we may not be able to attract or retain qualified senior personnel and our failure to do so could have an adverse effect on our ability to implement our business plan.

Significant disruptions of information technology systems or breaches of data security could adversely affect our business

Our business is increasingly dependent on complex and interdependent information technology systems, including internet-based systems, databases and programs, to support our business processes as well as internal and external communications. These computer systems are potentially vulnerable to breakdown, malicious intrusion and computer viruses which may result in the impairment of production and key business processes or loss of data or information. Additionally, our systems are potentially vulnerable to data security breaches-whether by employees, consultants or others-which may expose sensitive data to unauthorized persons. Such data security breaches could lead to the loss of trade secrets or other intellectual property, or could lead to the public exposure of personal information (including sensitive personal information) of our employees, clinical trial patients and others. Such disruptions and breaches of security could have a material adverse effect on our business, financial condition and results of operations.

Risks Relating to the Transfer of Certain Intellectual Property Rights to our Foreign Subsidiary

We may need to utilize all of our available net operating losses, and we may be subject to additional income taxes or an alternative minimum tax, in connection with our transfer of certain intellectual property rights to our foreign subsidiary.

During the fourth quarter of 2014, we licensed the non-U.S. rights to a significant portion of our intellectual property to our Bermuda-based subsidiary for approximately $11.0 million. The fair value of the intellectual property rights were determined by an independent third party. The proceeds from this sale represent a gain for U.S. tax purposes and will be offset by current year losses. However, the Internal Revenue Service, or the IRS, or the California Franchise Tax Board, or the CFTB, could challenge the valuation of the intellectual property rights and assess a greater valuation, which would require us to utilize a portion, or all, of our available net operating losses. If an IRS or a CFTB valuation exceeds our available net operating losses, we would incur additional income taxes. Our ability to use our net operating losses is subject to the limitations of IRS Section 382, as well as expiration of federal and state net operating loss carryforwards. Additionally, in the event our net operating losses were sufficient to offset the regular income taxes associated with an IRS or a CFTB revaluation of the intellectual property transferred to our Bermuda subsidiary, we would be subject to alternative minimum tax.

Risks Relating to Reliance on Third Parties

We outsource almost all of our operational and development activities, and if any party to which we have outsourced certain essential functions fails to perform its obligations under agreements with us, the development and commercialization of our lead product candidate and any future product candidates that we may develop could be delayed or terminated.

We generally rely on third-party consultants or other vendors to manage and implement the day-to-day conduct of our operations, including conducting clinical trials and manufacturing our current product candidates or any future product candidates that we may develop. Accordingly, we are and will continue to be dependent on the timeliness and effectiveness of their efforts. Our dependence on third parties includes key suppliers and third party service providers supporting the development, manufacture and regulatory approval of our products as well as support for our information technology systems and other infrastructure, including our network of leukapheresis providers. While our management team oversees these vendors, failure of any of these third parties to meet their contractual, regulatory and other obligations or the development of factors that materially disrupt the performance of these third parties could have a material adverse effect on our business. For example, all of the key oversight responsibilities for the development and manufacture of ICT-107, our lead product candidate, are conducted by our management team but all activities are the responsibility of third party vendors.

If a clinical research organization, or CRO, that we utilize is unable to allocate sufficient qualified personnel to our studies in a timely manner or if the work performed by it does not fully satisfy the requirements of the FDA or other regulatory agencies, we may encounter substantial delays and increased costs in completing our development efforts. Any manufacturer that we select may encounter difficulties in the manufacture of new products in commercial quantities, including problems involving product yields, product stability or shelf life, quality control, adequacy of control procedures and policies, compliance with FDA regulations and the need for further FDA approval of any new manufacturing processes and facilities. For example, in August 2016, we were notified by our manufacturer producing clinical supplies for our phase 3 trial in ICT-107 that it had experienced a possible mycoplasma contamination in one healthy donor validation manufacturing run. Subsequent tests were unable to positively identify the presence of mycoplasma. In October 2016, we were notified of an additional potential mycoplasma contamination in a manufacturing run. If microbial, viral or other contaminations, including mycoplasma, are discovered in our product candidates or in the manufacturing facilities in which our product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination, and manufacturing of our clinical supplies and enrollment in our trials may be delayed.

The manufacture of clinical supplies for studies and commercial quantities of our current product candidates and any future product candidates that we may develop are likely to be inherently more difficult and costly than typical chemical pharmaceuticals. This could delay commercialization of any of our product candidates or reduce the profitability of these candidates for us. If any of these occur, the development and commercialization of our product candidates could be delayed, curtailed or terminated because we may not have sufficient financial resources or capabilities to continue such development and commercialization on our own. If we rely on only one source for the manufacture of the clinical or commercial supplies of any of our product candidates or products, any production problems or supply constraints with that manufacturer could adversely impact the development or commercialization of that product candidate or product.

If we or our contractors or service providers fail to comply with regulatory laws and regulations, we or they could be subject to regulatory actions, which could affect our ability to develop, market and sell our product candidates and any other or future product candidates that we may develop and may harm our reputation.

If we or our manufacturers or other third party contractors fail to comply with applicable federal, state or foreign laws or regulations, we could be subject to regulatory actions, which could affect our ability to develop, market and sell our current product candidates or any future product candidates under development successfully and could harm our reputation and lead to reduced or non-acceptance of our proposed product candidates by the market. Even technical recommendations or evidence by the FDA through letters, site visits, and overall recommendations to academia or biotechnology companies may make the manufacturing of a clinical product extremely labor intensive or expensive, making the product candidate no longer viable to manufacture in a cost efficient manner. The mode of administration may make the product candidate not commercially viable. The required testing of the product candidate may make that candidate no longer commercially viable. The conduct of clinical trials may be critiqued by the FDA, or a clinical trial site's Institutional Review Board or Institutional Biosafety Committee, which may delay or make impossible clinical testing of a product candidate. The Data Safety Monitoring Committee for a clinical trial established by us may stop a trial or deem a product candidate unsafe to continue testing. This may have a material adverse effect on the value of the product candidate and our business prospects.

We will need to outsource and rely on third parties for the clinical development and manufacture, sales and marketing of our current product candidates or any future product candidates that we may develop, and our future success will be dependent on the timeliness and effectiveness of the efforts of these third parties.

We do not have the required financial and human resources to carry out on our own all the pre-clinical and clinical development for our vaccine product candidates or any other or future product candidates that we may develop, and do not have the capability and resources to manufacture, market or sell our current product candidates or any future product candidates that we may develop. Our business model calls for the partial or full outsourcing of the clinical and other development and manufacturing, sales and marketing of our product candidates in order to reduce our capital and infrastructure costs as a means of potentially improving our financial position.

Risks Relating to our Intellectual Property

Our patents and maintenance of trade secrets may not protect the proprietary rights of our products, impairing our competitive position, and our business, financial condition and results of operations could be adversely affected.

Our ability to compete successfully will depend significantly on our ability to obtain patent coverage for our products throughout their product lifetimes, defend patents that may have issued, protect trade secrets and operate without infringing the proprietary rights of others or others infringing on our proprietary rights. Although Cedars-Sinai as our licensor has filed

applications relative to a number of aspects of our cancer vaccine technology, we are responsible going forward to prosecute these patent applications. The patent situation in the fields of cancer vaccine technology and stem cell technologies is highly uncertain and involves complex legal and scientific questions.

Even if we have or are subsequently able to obtain patent protection for our vaccine product candidates or any of our other or future product candidates that we may develop, there is no guarantee that the coverage of these patents will be sufficiently broad to protect us from competitors with the same or similar technologies, or that we will be able to enforce our patents against potential infringement by third parties. Patent litigation is expensive, and we may not be able to afford the costs. We may not become aware on a timely basis that products we are developing or marketing infringe the rights of others, nor may we be able to detect unauthorized use or take appropriate and timely steps to enforce our own intellectual property rights. We may not hold or be able to obtain all of the proprietary rights to certain patents, process patents, and use patents that may be owned or controlled by third parties. As a result, we may be required to obtain additional licenses under third party patents to market certain of our potential products. If licenses are not available to us on acceptable terms, or at all, we may not be able to market these products or we may be required to delay marketing until the expiration of such patents. Protecting our intellectual property rights may also consume significant management time and resources.

Nondisclosure agreements with employees and third parties may not adequately prevent disclosure of trade secrets and other proprietary information.

In order to protect our proprietary technology and processes, we will also rely in part on nondisclosure agreements with our employees, licensing partners, consultants, agents and other organizations to which we disclose our proprietary information. These agreements may not effectively prevent disclosure of confidential information, may be limited as to their term, and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. In addition, others may independently discover trade secrets and proprietary information, and in such cases we could not assert any trade secret rights against such party. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position. Since we will rely on trade secrets and nondisclosure agreements, in addition to patents, to protect some of our intellectual property, there is a risk that third parties may obtain and improperly utilize our proprietary information to our competitive disadvantage. We may not be able to detect unauthorized use or take appropriate and timely steps to enforce our intellectual property rights.

The manufacture, offer for sale, use or sale of our current product candidates or any future product candidates that we may develop may infringe on the patent rights of others, and we may be forced to take additional licenses, or litigate if an intellectual property dispute arises.

Should third parties patent specific cells, systems, receptors, antigens or other items that we are seeking to utilize in our development activities, we may be forced to license rights from these parties or abandon our development activities if we are unable to secure these rights on attractive terms or at all. In light of the large number of companies and institutions engaged in research and development in the cellular therapy field, we anticipate that many parties will be seeking patent rights for many cellular based technologies and that licensing and cross-licensing of these rights among various competitors may arise. Specifically, our dendritic cell-based vaccine product candidates utilize multiple antigens for which we may be required to obtain licenses from one or more other parties before we can commercialize them. We may not be able to obtain all of the licenses that we may need on attractive terms or at all, which could result in our having to reformulate or abandon this product candidate or delay its development or commercialization until the expiration of third party patent rights.

If we infringe or are alleged to have infringed another party's patent rights, we may be required to defend an infringement action or challenge the validity of the patents in court. Patent litigation is costly and time consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, if we do not obtain a license, do not successfully defend an infringement action or are unable to have infringed patents declared invalid, we may:

- incur substantial monetary damages;
- encounter significant delays in marketing our current product candidates or any future product candidates that we may develop; or
- be unable to conduct or participate in the manufacture, use, offer for sale or sale of product candidates or methods of treatment requiring licenses.

Parties making such claims may be able to obtain injunctive relief that could effectively block our ability to further develop or commercialize our current product candidates or any future product candidates that we may develop in the United States and abroad and could result in the award of substantial damages. Defense of any lawsuit or failure to obtain any such license could substantially harm us. Litigation, regardless of outcome, could result in substantial cost to and a diversion of efforts by us.

Risks Related to our Common Stock

Our stock price may be volatile, and your investment in our common stock could decline in value.

The market prices for our common stock and the securities of other development stage pharmaceutical or biotechnology companies have been highly volatile and may continue to be highly volatile in the future. Between January 1, 2016 and May 10, 2017, the stock price for our common stock has ranged from $1.40 to $15.03. The following factors, in addition to other risk factors described in this section, may have a significant impact on the market price of our common stock:

- the progress and success of clinical trials and preclinical activities (including studies and manufacture of materials) of our product candidates conducted by us or our collaborative partners or licensees;
- the receipt or failure to receive the additional funding necessary to conduct our business;
- selling by large stockholders;
- presentations of detailed clinical trial data at medical and scientific conferences and investor perception thereof;
- announcements of technological innovations or new commercial products by our competitors or us;
- developments concerning proprietary rights, including patents by our competitors or us;
- developments concerning our collaborations;
- publicity regarding actual or potential medical results relating to products under development by our competitors or us;
- regulatory developments in the United States and foreign countries;
- manufacturing or supply disruptions at our contract manufacturers, or failure by our contract manufacturers to obtain or maintain approval of the FDA or comparable regulatory authorities;
- litigation or arbitration;
- economic and other external factors or other disaster or crisis; and
- period-to-period fluctuations in financial results.

Furthermore, during the last few years, the stock markets have experienced extreme price and volume fluctuations and the market prices of some equity securities continue to be volatile. These fluctuations often have been unrelated or disproportionate to the operating performance of these companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may cause the market price of shares of our common stock to decline.

Future equity issuances or a sale of a substantial number of shares of our common stock may cause the price of our common stock to decline.

Because we will continue to need additional capital to continue to expand our business and our research and development activities, among other things, we may conduct additional equity offerings. In addition, pursuant to our Sales Agreement we may offer and sell, from time to time, shares of our common stock having an offering price up to an aggregate total of $15.1 million. As of May 15 15, 2017, we had approximately $14.3 million available for offer and sale pursuant to our ATM facility. Sales under our ATM facility are registered on a registration statement on Form S-3. Under applicable rules and

regulations, we may not sell more than the equivalent of one-third of our public float during any 12 consecutive months so long as our public float is less than $75 million, which would limit our ability to raise funds using our ATM facility. If we or our stockholders sell substantial amounts of our common stock (including shares issued upon the exercise of options and warrants) in the public market, the market price of our common stock could fall. A decline in the market price of our common stock could make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem appropriate. Furthermore, if we obtain funds through a credit facility or through the issuance of debt or preferred securities, these securities would likely have rights senior to your rights as a common stockholder, which could impair the value of our common stock.

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.

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, the NYSE MKT will consider suspending dealings in, or delisting, securities of an issuer that has stockholders' equity of less than $6 million if that issuer has sustained losses from continuing operations and/or net losses in its five most recent fiscal years. We have had a loss from operations and net loss in each of our five most recent fiscal years and we expect to incur a loss from operations and net loss for 2017. At December 31, 2016, our stockholders' equity was $6.1 million, and in March 2017, we received an early warning letter from the NYSE MKT indicating that if our stockholders' equity falls below $6 million, the NYSE MKT may take formal action and determine that we are no longer suitable for listing and may commence delisting proceedings pursuant Section 1003(a)(iii) of the NYSE MKT Company Guide. As of March 31, 2017, our stockholders' equity was $478,725. 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.

Potential conflicts of interest could arise for certain members of our management team in the performance of their services for us.

Dr. John Yu is a full-time employee of Cedars-Sinai, which owns shares of our common stock and where we previously conducted and plan to conduct future research and development work, including clinical trials of our vaccine product candidates. Potential conflicts of interest could arise as a result, including for Dr. Yu in performing services for us and for Cedars-Sinai, in establishing the terms under which Cedars-Sinai performs work for us, and in Cedars-Sinai conducting the research. Dr. Yu and other scientists associated with Dr. Yu at Cedars-Sinai may perform research in the field of brain tumors that is sponsored by other third parties. We have no present right to acquire any interest in the intellectual property generated by this research, including several clinical trials with dendritic cell-based vaccines that have been completed or are planned to be initiated. These studies may compete for patients to be enrolled in our current or future clinical trials.

Substantial sales of our common stock could cause our common stock price to fall.

As of May 10, 2017, we had 3,464,175 shares of common stock outstanding and another 1,727,017 shares of common stock issuable upon exercise of options or warrants, most of which are eligible to be publicly resold under current registration statements or pursuant to Rule 144. The possibility that substantial amounts of our common stock may be sold in the public market may adversely affect prevailing market prices for our common stock and could impair our ability to raise capital through the sale of our equity securities.

Two research reports were published by one of the underwriters after the initial filing of our registration statement in connection with our August 2016 underwritten public offering. If either of these research reports were held to violate the Securities Act, investors in that offering may have the right to seek refunds or damages.

On June 7, 2016 and June 8, 2016, after the initial filing of the registration statement in connection with our recent underwritten public offering, two research reports were written and distributed by Maxim Group LLC, one of the underwriters in the offering. These research reports were not intended to constitute offering materials in connection with this offering; however, there may nevertheless be a risk that the reports could be deemed prospectuses not meeting the requirements of the Securities Act, and the distribution of the reports could be found to be a violation of Section 5 of the Securities Act.

If the distribution of these research reports were to be held by a court to be a violation by us of Section 5 of the Securities Act, purchasers in the offering that received the research reports, if any, and potentially all purchasers of common stock in the offering would, under the Securities Act, have the right for a period of one year from the date of purchase to seek recovery of the consideration paid in connection with their purchase, or, if they had already sold the common stock purchased in the offering, sue us for damages resulting from their purchase. The total amount of these damages could potentially equal the gross proceeds of the offering, plus interest and the purchasers' attorneys' fees, if these investors seek recovery or damages after an entire loss of their investment. We also could be subject to potential enforcement actions by the Securities and Exchange Commission, which could result in injunctive relief or the imposition of fines. Although we would vigorously contest any claims brought on the basis of these research reports, there can be no guarantee that we would be successful in refuting any and all such claims. If any such claims were to succeed, we might not have sufficient funds to pay the resulting damages or to finance a repurchase of our common stock, and our reputation and our business could be materially and adversely affected.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Description
31.1	Certification of the Registrant's Principal Executive Officer under Exchange Act Rule 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Registrant's Principal Financial Officer under Exchange Act Rule 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Registrant's Principal Executive Officer under 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of the Registrant's Principal Financial Officer under 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

SIGNATURES

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

Dated: May 15, 2017

IMMUNOCELLULAR THERAPEUTICS, LTD.

By: /s/ Anthony Gringeri

Name: Anthony Gringeri, Ph.D.

Title: President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ David Fractor

Name: David Fractor

Title: Chief Financial Officer
(Principal Financial and Accounting Officer)

EXHIBIT INDEX

IMMUNOCELLULAR THERAPEUTICS, LTD.

FORM 10-Q FOR QUARTER ENDED MARCH 31, 2017

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Exhibit 31.1

Certification of the Principal Executive Officer Under Section 302 of the Sarbanes-Oxley Act

I, Anthony Gringeri, certify that:

1. I have reviewed this Form 10-Q of ImmunoCellular Therapeutics, Ltd.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 15, 2017

By: /s/ Anthony Gringeri

Name: Anthony Gringeri, Ph.D.

Title: President and Chief Executive Officer

Exhibit 31.2

Certification of the Principal Financial Officer Under Section 302 of the Sarbanes-Oxley Act

I, David Fractor, certify that:

1. I have reviewed this Form 10-Q of ImmunoCellular Therapeutics, Ltd.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our concluer sions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 15, 2017

By: /s/ David Fractor

Name: David Fractor

Title: Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF THE PRINCIPAL EXECUTIVE OFFICER

Pursuant to the requirement set forth in Rule 13a -14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. § 1350), the undersigned officer of ImmunoCellular Therapeutics, Ltd. (the "Company") hereby certifies that, to the best of his knowledge:

1. The Company's Quarterly Report on Form 10-Q for the period ended March 31, 2017 ("Periodic Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 15, 2017

By: /s/ Anthony Gringeri

Name: Anthony Gringeri, Ph.D.

Title: President and Chief Executive Officer

Exhibit 32.2

CERTIFICATION OF THE PRINCIPAL FINANCIAL OFFICER

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. § 1350), the undersigned officer of ImmunoCellular Therapeutics, Ltd. (the "Company") hereby certifies that, to the best of his knowledge:

1. The Company's Quarterly Report on Form 10-Q for the period ended March 31, 2017 ("Periodic Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 15, 2017

By: /s/ David Fractor

Name: David Fractor

Title: Chief Financial Officer