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As filed with the Securities and Exchange Commission on May 5, 2014

Registration No. 333-191238

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

Post-Effective Amendment No. 2
to
FORM S-1 ON FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Intra-Cellular Therapies, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**36-4742850**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

3960 Broadway
New York, New York 10032
(212) 923-3344
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Sharon Mates, Ph.D.
Chairman, President and Chief Executive Officer
Intra-Cellular Therapies, Inc.
3960 Broadway
New York, New York 10032
(212) 923-3344
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

William C. Hicks, Esq.
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One Financial Center
Boston, MA 02111
(617) 542-6000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: ☐

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: ☒

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ☐

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting 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	☒

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

EXPLANATORY NOTE

On September 18, 2013, Intra-Cellular Therapies, Inc. (the "Company") filed a registration statement with the Securities and Exchange Commission (the "SEC") on Form S-1, (File No. 333-191238). The registration statement, as amended, was declared effective by the SEC on December 18, 2013 to initially register for resale by the selling stockholders identified in the prospectus an aggregate of 21,961,496 shares of the registrant's common stock, par value $0.0001 per share, that were privately issued to the selling stockholders in connection with a merger that occurred on August 29, 2013. On March 31, 2014, the Company filed a Post-Effective Amendment No. 1 to the registration statement on Form S-1, which was declared effective by the SEC on April 4, 2014. This Post-Effective Amendment No. 2 to Form S-1 on Form S-3 is being filed by the Company to convert the Form S-1 into a registration statement on Form S-3, and contains an updated prospectus relating to the offering and sale of the shares that were registered for resale on the Form S-1.

All applicable registration fees were paid at the time of the original filing of the Registration Statement.

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The information in this preliminary prospectus is not complete and may be changed. The selling stockholders named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and the selling stockholders named in this prospectus are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated May 5, 2014

PROSPECTUS

20,982,902 Shares of Common Stock

This prospectus relates to the offering and resale by the selling stockholders identified herein of up to 20,982,902 shares of our common stock, par value $0.0001 per share. These shares were privately issued to the selling stockholders on August 29, 2013 in exchange for shares of Intra-Cellular Therapies, Inc., a Delaware corporation, which is now our wholly-owned subsidiary and which has assumed the name ITI, Inc. We will not receive any proceeds from the sale of these shares by the selling stockholders. The selling stockholders may sell the shares as set forth herein under "Plan of Distribution." For a list of the selling stockholders, see the section entitled "Selling Stockholders" on page 11. We have borne and will continue to bear the costs relating to the registration of these shares.

Our common stock is listed on The NASDAQ Global Select Market under the symbol "ITCI." On May 2, 2014, the last reported sale price of our common stock on The NASDAQ Global Select Market was $16.08 per share. The selling stockholders may sell all or a portion of their shares through public or private transactions at prevailing market prices or at privately negotiated prices.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

We are an "emerging growth company" as defined under the federal securities laws, and, as such, are eligible for reduced public company reporting requirements. See "Prospectus Summary—Implications of Being an Emerging Growth Company."

Investment in our common stock involves risks. See "Risk Factors" beginning on page 9 of this prospectus.

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

The date of this prospectus is , 2014

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ABOUT THIS PROSPECTUS

You should rely only on the information contained in this prospectus, incorporated by reference in this prospectus, or contained in any prospectus supplement or free writing prospectus filed with the Securities and Exchange Commission. Neither we nor the selling stockholders have authorized anyone to provide you with additional information or information different from that contained in this prospectus or incorporated by reference in this prospectus. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of shares of our common stock, and the information we have incorporated by reference in this prospectus is accurate only as of the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since such dates. You should read both this prospectus and any prospectus supplement together with additional information under the headings “Where You Can Find More Information” and “Information Incorporated by Reference.” To the extent there are inconsistencies between any prospectus supplement, this prospectus and any documents incorporated by reference, the document with the most recent date will control.

For investors outside the United States: Neither we nor the selling stockholders have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside the United States.

PROSPECTUS SUMMARY

The following summary highlights selected information contained elsewhere in this prospectus or incorporated by reference in this prospectus. This summary is not complete and does not contain all the information that should be considered before investing in our common stock. Before making an investment decision, investors should carefully read the entire prospectus, and the information incorporated by reference in this prospectus paying particular attention to the risks referred to under the headings "Risk Factors" and "Cautionary Statement Regarding Forward-Looking Statements" and our financial statements and the notes to those financial statements that are incorporated by reference in this prospectus.

As used in this prospectus, unless the context requires otherwise, the terms "Company," "we," "our" and "us" refer to Intra-Cellular Therapies, Inc. and our wholly-owned operating subsidiary, ITI, Inc.

Overview

We are a biopharmaceutical company focused on the discovery and clinical development of innovative, small molecule drugs that address underserved medical needs in neuropsychiatric and neurological disorders by targeting intracellular signaling mechanisms within the central nervous system, or CNS. Our lead product candidate, ITI-007, is in clinical development as a first-in-class treatment for schizophrenia. Current medications available for the treatment of schizophrenia do not adequately address the broad array of symptoms associated with this CNS disorder. Use of these current medications also is limited by their substantial side effects. ITI-007 is designed to be effective across a wider range of symptoms, treating both the acute and residual phases of schizophrenia, with improved safety and tolerability.

ITI-007 exhibited antipsychotic efficacy in a randomized, double-blind, placebo and active controlled Phase 2 clinical trial in patients with an acutely exacerbated episode of schizophrenia. In December 2013, we announced the clinical results from this Phase 2 trial. In this Phase 2 trial, 335 patients were randomized to receive one of four treatments: 60 mg of ITI-007, 120 mg of ITI-007, 4 mg of risperidone (active control) or placebo in a 1:1:1:1 ratio, orally once daily for 28 days. The primary endpoint for this clinical trial was change from baseline to Day 28 on the Positive and Negative Syndrome Scale, or PANSS, total score. In this study, ITI-007 met the trial's pre-specified primary endpoint, improving symptoms associated with schizophrenia as measured by a statistically significant and clinically meaningful decrease in the PANSS total score. The trial also met key secondary outcome measures related to efficacy on PANSS subscales and safety. Additional data from the Phase 2 trial are set forth in Item 1 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 under "Business—Our Clinical Programs—ITI-007 Program—ITI-007 for the treatment of exacerbated and residual schizophrenia—Phase 2 Clinical Trial (ITI-007-005), which is incorporated by reference in this prospectus." In the second quarter of 2014, we plan to request a meeting with the U.S. Food and Drug Administration, or FDA, to discuss the existing ITI-007 safety and efficacy data and our future clinical development plans for ITI-007, including our plans to conduct separate, but overlapping, well-controlled clinical trials in schizophrenia and bipolar disorder. The Phase 3 clinical trial design for ITI-007 in schizophrenia will be the primary focus of the first meeting. Additional meetings may be requested, as needed, to discuss in greater detail our plans for bipolar disorder, and other elements of our regulatory strategy, including additional therapeutic indications, as the program progresses.

Subject to discussions with the FDA, we intend to initiate Phase 3 clinical trials and additional supporting trials in patients with acute exacerbated schizophrenia in the second half of 2014 and plan to initiate separate additional trials in bipolar disorder in 2015. We expect that the planned trials in bipolar disorder will overlap in time with the clinical conduct of the planned trials in schizophrenia. We have not yet discussed our plans to develop ITI-007 for the treatment of bipolar disorder with the FDA. We currently anticipate conducting two placebo-controlled Phase 3 clinical trials of ITI-007 in patients with acute exacerbated schizophrenia, with

approximately 300 to 400 patients per trial. We expect that these trials would include a four-week to six-week treatment duration. Subject to our discussions with the FDA, our finalization of the protocols for the Phase 3 clinical trials and timely enrollment, we anticipate that the results of these Phase 3 clinical trials of ITI-007 in patients with acute exacerbated schizophrenia could be available as soon as the fourth quarter of 2015. In addition to our Phase 3 clinical trials, we will need to complete other clinical and non-clinical trials and manufacturing and pre-commercialization activities necessary to support the submission of a planned New Drug Application, or NDA, for ITI-007 in patients with acute exacerbated schizophrenia, which we currently expect could occur at the end of 2016 or the beginning of 2017.

We are also pursuing clinical development of ITI-007 for the treatment of additional CNS diseases and disorders. At the lowest doses, ITI-007 has been demonstrated to act primarily as a potent 5-HT2A serotonin receptor antagonist. As the dose is increased, additional benefits are derived from the engagement of additional drug targets, including modest dopamine receptor modulation and modest inhibition of serotonin transporters. We believe that combined interactions at these receptors may provide additional benefits above and beyond selective 5-HT2A antagonism for treating agitation, aggression and sleep disturbances in diseases that include dementia, Alzheimer's disease and autism spectrum disorders, while avoiding many of the side effects associated with more robust dopamine receptor antagonism. As the dose of ITI-007 is further increased, leading to moderate dopamine receptor modulation, inhibition of serotonin transporters, and indirect glutamate modulation, these actions complement the complete blockade of 5-HT2A serotonin receptors. At a dose of 60 mg, ITI-007 has been shown effective in treating the symptoms associated with schizophrenia, and we believe this higher dose range will be useful for the treatment of bipolar disorder, major depressive disorder and other neuropsychiatric diseases.

In March 2014, we announced the initiation of ITI-007-200, a Phase 1/2 clinical trial designed to evaluate the safety, tolerability and pharmacokinetics of low doses of ITI-007 in healthy geriatric subjects and in patients with dementia, including Alzheimer's disease. The commencement of this study marks an important milestone in our strategy to develop low doses of ITI-007 for the treatment of behavioral disturbances associated with dementia and related disorders. We expect that initial data from the trial will be available in the second half of 2014.

Given the potential utility for ITI-007 and follow-on compounds to treat these additional indications, we may investigate, either on our own or with a partner, agitation, aggression and sleep disturbances in additional diseases that include autism spectrum disorders; major depressive disorder; intermittent explosive disorder; non-motor symptoms and motor complications associated with Parkinson's disease; and post-traumatic stress disorder. We hold exclusive, worldwide commercialization rights to ITI-007 and a family of compounds from Bristol-Myers Squibb Company pursuant to an exclusive license.

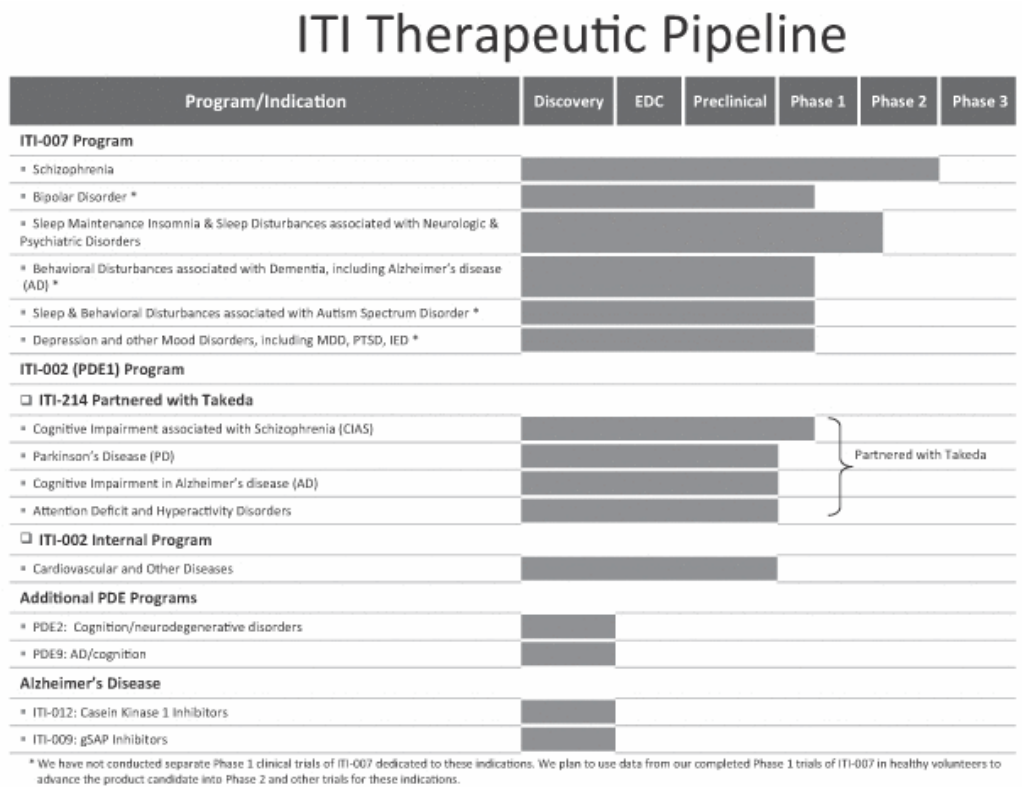
We have a second major program that has yielded a portfolio of compounds that selectively inhibits the enzyme phosphodiesterase 1, or PDE1. PDE1 helps regulate brain activity related to cognition, memory processes and movement/coordination. We have licensed the lead compound in this portfolio, ITI-214, and other compounds in this portfolio, to Takeda Pharmaceutical Company Limited, or Takeda. ITI-214 is the first compound in its class to successfully advance into Phase 1 clinical trials and is being developed for the treatment of cognitive impairment associated with schizophrenia, or CIAS, and other disorders. The results of our first Phase 1 clinical trial in 70 subjects in a randomized, double-blind, placebo-controlled study indicate that ITI-214 was safe and well-tolerated across a broad range of single oral doses. Other compounds in the PDE1 portfolio outside the Takeda collaboration are being advanced for the treatment of other indications, including non-CNS therapeutic areas.

Our pipeline also includes pre-clinical programs that are focused on advancing drug candidates for the treatment of cognitive dysfunction, in both schizophrenia and Alzheimer's disease, and for disease modification and the treatment of neurodegenerative disorders, including Alzheimer's disease.

We have assembled a management team with significant industry experience to lead the discovery and development of our product candidates. We complement our management team with a group of scientific and clinical advisors that includes recognized experts in the fields of schizophrenia and other CNS disorders, including Nobel laureate, Dr. Paul Greengard, one of our co-founders.

Our Clinical Programs

Our pipeline includes two product candidates in clinical development and two product candidates in advanced pre-clinical testing. We believe that our product candidates offer innovative therapeutic approaches and may provide significant advantages relative to current therapies. The following table summarizes our product candidates and programs:



Our Strategy

Our goal is to discover and develop novel small molecule therapeutics for the treatment of CNS diseases in order to improve the lives of people suffering from such illnesses. Using our key understanding of intracellular signaling, we seek to accomplish our goal, using our in-house expert drug discovery and clinical development teams, in two ways:

- we seek to have the capability to develop first-in-class medications with novel mechanisms that have the potential to treat CNS diseases for which there are no previously marketed drugs; and

- we seek to develop drugs that either can differentiate themselves in competitive markets by addressing aspects of CNS disease which are not treated by currently marketed drugs or can be effective with fewer side effects.

The key elements of our strategy are to:

- complete the development of ITI-007 for its lead indication, treatment of acute symptoms in schizophrenia, and for additional neuropsychiatric indications, such as bipolar disorder and residual symptoms in schizophrenia;
- expand the commercial potential of ITI-007 by investigating its usefulness in neurological areas, such as behavioral disturbances in dementia, including Alzheimer's disease and autism spectrum disorder, and in additional neuropsychiatric indications, such as sleep disorders associated with neuropsychiatric and neurological disorders and major depressive disorder;
- continue to develop with our collaboration partner, Takeda, PDE inhibitor compounds, such as ITI-214, for CNS indications such as CIAS; and
- advance earlier stage product candidates in our pipeline.

Risks Relating to Our Business

We are a biopharmaceutical company, and our business and ability to execute our business strategy are subject to a number of significant risks of which you should be aware before you decide to buy shares of our common stock. Among these important risks are the following:

- We currently do not have, and may never have, any products that generate significant revenues.
- There is no guarantee that our planned clinical trials for ITI-007 in acute schizophrenia or in other indications will be successful.
- If the FDA does not agree with our clinical development plans to advance ITI-007 for the treatment of schizophrenia and bipolar disorder with separate, but overlapping, well-controlled clinical trials in both indications, our development of ITI-007 may be delayed and the costs of our development of ITI-007 would increase.
- We expect our net losses to continue for at least several years and are unable to predict the extent of future losses or when we will become profitable, if ever.
- We will require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not so available, may require us to delay, limit, reduce or cease our operations.
- Our lead product candidate, ITI-007, is only part way through the clinical trials we anticipate needing to complete before we may be able to submit an NDA to the FDA. Clinical trials are long, expensive and unpredictable, and there is a high risk of failure.
- Delays, suspensions and terminations in our clinical trials could result in increased costs to us, delay our ability to generate product revenues and therefore may have a material adverse effect on our business, results of operations and future growth prospects.
- Safety issues with our product candidates, or with product candidates or approved products of third parties that are similar to our product candidates, could give rise to delays in the regulatory approval process, restrictions on labeling or product withdrawal after approval.
- Preliminary and interim data from our clinical studies that we may announce or publish from time to time may change as more patient data become available.

- We rely on third parties to conduct our clinical trials and perform data collection and analysis, which may result in costs and delays that prevent us from successfully commercializing our product candidates.
- Even if we successfully complete the clinical trials of one or more of our product candidates, the product candidates may fail for other reasons.
- Following regulatory approval of any of our drug candidates, we will be subject to ongoing regulatory obligations and restrictions, which may result in significant expense and limit our ability to commercialize our potential products.
- Relying on third-party manufacturers may result in delays in our clinical trials, regulatory approvals and product introductions.
- We will need to continue to manage our organization and we may encounter difficulties with our staffing and any future transitions, which could adversely affect our results of operations.
- Our ability to compete may be undermined if we do not adequately protect our proprietary rights.
- Many of our competitors have greater resources and capital than us, putting us at a competitive disadvantage. If our competitors develop and market products that are more effective than our product candidates, they may reduce or eliminate our commercial opportunity.
- Our stock price may fluctuate significantly and you may have difficulty selling your shares based on current trading volumes of our stock. In addition, numerous other factors could result in substantial volatility in the trading price of our stock.
- The price of our common stock could be subject to volatility related or unrelated to our operations.
- Management and certain members of our board of directors beneficially own a substantial amount of our outstanding equity securities and will be able to exert substantial control over us.

For additional information about the risks we face, please see the section of this prospectus entitled “Risk Factors.”

Implications of Being an Emerging Growth Company

As a company with less than $1.0 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act, or JOBS Act, enacted in April 2012. An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being required to provide only two years of audited financial statements in addition to any required unaudited interim financial statements, with correspondingly reduced disclosure in the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of our periodic reports and registration statements;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions for up to five years after the first sale of our common equity securities pursuant to an effective registration statement under the Securities Act of 1933, as amended, or the Securities Act. Our first registration statement filed under the Securities Act became effective on December 18, 2013. However, if certain events occur prior to the end of such five year period, including if we become a "large accelerated filer," our annual gross revenues exceed $1 billion or we issue more than $1 billion of non-convertible debt in any three year period, we would cease to be an emerging growth company prior to the end of such five year period.

We may choose to take advantage of some but not all of these reduced burdens. We have taken advantage of certain of the reduced disclosure obligations, which include providing only two years of audited financial statements and correspondingly reduced financial disclosures and reduced executive compensation disclosure in our periodic reports, proxy statements and registration statements, and may elect to take advantage of other reduced burdens in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. However, we have irrevocably elected not to avail ourselves of this extended transition period for complying with new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

We are also a "smaller reporting company" as defined in Rule 12b-2 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and have elected to take advantage of certain of the scaled disclosure available to smaller reporting companies.

Reverse Merger

On August 29, 2013, Oneida Resources Corp., which we refer to as the Company, we, our and us, completed a reverse merger transaction in which ITI, Inc., a Delaware corporation and wholly-owned subsidiary of the Company, merged with and into Intra-Cellular Therapies, Inc., a Delaware corporation, which we refer to as ITI, with ITI remaining as the surviving entity and a wholly-owned operating subsidiary of the Company. This transaction is referred to throughout this prospectus as the "Merger." In the Merger, each outstanding share of capital stock of ITI was exchanged for 0.5 shares of our common stock, which we refer to as the "Exchange," and we assumed each outstanding option and outstanding warrant of ITI. Following the Merger and the redemption of all of our then outstanding shares at the closing of the Merger, the former shareholders of ITI owned 100% of the shares of our outstanding capital stock. In connection with the Merger, ITI changed its name to "ITI, Inc." and we changed our name to "Intra-Cellular Therapies, Inc."

Public Offering in February 2014

On February 5, 2014, we completed our initial public offering of 7,063,300 shares of our common stock at a price of $17.50 per share for aggregate gross proceeds of approximately $123.6 million, and net proceeds of approximately $115.4 million.

Our Corporate Information

We were originally incorporated in the State of Delaware in August 2012 under the name "Oneida Resources Corp." Prior to the Merger, Oneida Resources Corp. was a "shell" company registered under the Exchange Act with no specific business plan or purpose until it began operating the business of ITI through the Merger transaction on August 29, 2013. ITI was incorporated in Delaware in May 2001 to focus primarily on the

development of novel drugs for the treatment of neuropsychiatric and neurologic diseases and other disorders of the central nervous system. Effective upon the Merger, a wholly-owned subsidiary of the Company merged with and into ITI, and ITI continues as the operating subsidiary of the Company. As used herein, the words the "Company," "we," "us," and "our" refer to the Delaware corporation operating the business of ITI as a wholly-owned subsidiary, which business continues as the business of the Company.

Our corporate headquarters and laboratory are located at 3960 Broadway, New York, New York 10032, and our telephone number is (212) 923-3344. In March 2014, we entered into a long-term lease for laboratory and office space located at 430 East 29th Street, New York, New York 10016, which we expect to occupy as our headquarters on or about February 2015. We also have an office in Towson, Maryland. We maintain a website at www.intracellulartherapies.com, to which we regularly post copies of our press releases as well as additional information about us. Our filings with the Securities and Exchange Commission, or SEC, will be available free of charge through the website as soon as reasonably practicable after being electronically filed with or furnished to the SEC. Information contained in our website does not constitute a part of this prospectus or our other filings with the SEC.

All brand names or trademarks appearing in this prospectus are the property of their respective holders. Use or display by us of other parties' trademarks, trade dress, or products in this prospectus is not intended to, and does not, imply a relationship with, or endorsements or sponsorship of, us by the trademark or trade dress owners.

THE OFFERING

Common stock offered by selling stockholders	20,982,902 shares
Common stock outstanding	29,222,746 shares
Use of proceeds	We will not receive any proceeds from the sale of the shares of common stock offered by the selling stockholders.
Offering price	The selling stockholders may sell all or a portion of their shares through public or private transactions at prevailing market prices or at privately negotiated prices.
Risk factors	You should read the "Risk Factors" section of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
NASDAQ Global Select Market symbol	ITCI

The number of shares of common stock outstanding is based on an aggregate of 29,222,746 shares outstanding as of April 15, 2014, and excludes:

- 1,555,626 shares of common stock issuable upon exercise of outstanding options as of April 15, 2014, at a weighted average exercise price of $3.65 per share, of which 1,169,641 shares were vested as of such date;
- 1,822 shares of common stock issuable upon the exercise of a warrant outstanding as of April 15, 2014, at an exercise price of $6.0264 per share; and
- 1,476,890 shares of common stock reserved for future issuance under our 2013 Equity Incentive Plan, or the 2013 Plan, as of April 15, 2014, plus (i) up to an additional maximum of 1,387,626 shares which may be issued solely after the cancellation or expiration of any unexercised stock options that we assumed in the Merger, and (ii) any future increases in the number of shares of common stock reserved for issuance under the 2013 Plan pursuant to evergreen provisions.

Unless otherwise indicated in this prospectus, all share and per share figures reflect the exchange of each share of ITI common stock and each share of ITI preferred stock then outstanding for 0.5 shares of our common stock upon the effective time of the Merger on August 29, 2013.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties and all other information, documents or reports included or incorporated by reference in this prospectus and, if applicable, any prospectus supplement or other offering materials, including the risks and uncertainties discussed under "Risk Factors" in our most recent Annual Report on Form 10-K filed with the SEC, which are incorporated by reference, in this prospectus, and any updates to those risk factors included from time to time in our periodic and current reports filed with the SEC and incorporated by reference in this prospectus. Our business, financial condition or results of operations could be harmed by any of these risks. As a result, you could lose some or all of your investment in our common stock. Additional risks not currently known to us or other factors not perceived by us to present significant risks to our business at this time also may impair our business operations.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference in this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Words such as, but not limited to, "believe," "expect," "anticipate," "estimate," "intend," "may," "plan," "potential," "predict," "project," "targets," "likely," "will," "would," "could," "should," "continue," and similar expressions or phrases, or the negative of those expressions or phrases, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus and incorporated by reference in this prospectus, we caution you that these statements are based on our projections of the future that are subject to known and unknown risks and uncertainties and other factors that may cause our actual results, level of activity, performance or achievements expressed or implied by these forward-looking statements, to differ. The sections in our periodic reports, including our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, entitled "Business," "Risk Factors," and "Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as other sections in this prospectus and the documents or reports incorporated by reference in this prospectus, discuss some of the factors that could contribute to these differences. These forward-looking statements include, among other things, statements about:

- the accuracy of our estimates regarding expenses, future revenues and capital requirements and the need for additional financing;
- the initiation, cost, timing, progress and results of our development activities, preclinical studies and clinical trials;
- the timing of and our ability to obtain and maintain regulatory approval of our existing product candidates, any product candidates that we may develop, and any related restrictions, limitations, and/or warnings in the label of any approved product candidates;
- our plans to research, develop and commercialize our future product candidates;
- our collaborators' election to pursue research, development and commercialization activities;
- our ability to obtain future reimbursement and/or milestone payments from our collaborators;
- our ability to attract collaborators with development, regulatory and commercialization expertise;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- our ability to successfully commercialize our product candidates;

- the size and growth of the markets for our product candidates and our ability to serve those markets;
- the rate and degree of market acceptance of any future products;
- the success of competing drugs that are or become available;
- regulatory developments in the United States and other countries;
- the performance of our third-party suppliers and manufacturers and our ability to obtain alternative sources of raw materials;
- our ability to obtain additional financing;
- our use of the proceeds from our public offering in February 2014 and our private placement in August 2013;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act; and
- our ability to attract and retain key scientific or management personnel.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important cautionary statements in this prospectus, particularly in the "Risk Factors" section and the risk factors incorporated by reference herein, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

You should read this prospectus, the documents and reports incorporated by reference in this prospectus, and the documents that we reference in this prospectus and have filed as exhibits to the registration statement of which this prospectus forms a part, completely and with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this prospectus are made as of the date of this prospectus and the forward-looking statements contained in any document or report incorporated by reference in this prospectus are made as of the dates of such documents or reports. We do not assume, and specifically disclaim, any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We are filing the registration statement of which this prospectus forms a part to permit holders of the shares of our common stock described in the section entitled "Selling Stockholders" to resell such shares. We will not receive any proceeds from the resale of any shares offered by this prospectus by the selling stockholders.

SELLING STOCKHOLDERS

This prospectus covers the resale by the selling stockholders identified below of 20,982,902 shares of our common stock. The selling stockholders acquired our securities pursuant to the Exchange in the Merger. None of our selling stockholders received any of our securities as compensation for underwriting services. We will not receive any proceeds from the resale of the common stock by the selling stockholders.

Except as disclosed in the footnotes below, none of the selling stockholders has been an officer or director of ours or any of our predecessors or affiliates within the past three years. Except as disclosed in the footnotes below, no selling stockholder had a material relationship with the Company or any of its affiliates within the last three years. Except as disclosed in the footnotes below, none of the selling stockholders is affiliated with a broker dealer.

The following table and the accompanying footnotes are based in part on information supplied to us by the selling stockholders. The table and footnotes assume that the selling stockholders will sell all of the shares listed. However, because the selling stockholders may sell all or some of their shares under this prospectus from time to time, or in another permitted manner, we cannot assure you as to the actual number of shares that will be sold by the selling stockholders or that will be held by the selling stockholders after completion of any sales. We do not know how long the selling stockholders will hold the shares before selling them.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to options or warrants that are currently exercisable or exercisable within 60 days of April 15, 2014 are considered outstanding and beneficially owned by the person holding the options or warrants for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person. Except as otherwise noted in the footnotes below, we believe the persons and entities in this table have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to community property laws, where applicable. The inclusion of any shares in this table does not constitute an admission of beneficial ownership by the persons named below. The beneficial owners listed below are sorted alphabetically by first name.

	Shares Beneficially Owned Before the Offering			Shares Beneficially Owned After the Offering	
Name of Beneficial Owner	(#)	(%)(1)	Shares Being Offered (#)	(#)(1)(2) (3)	(%)(1) (2)
Abbot A. Thayer	750	*	750	—	*
Achyuet Sahasrabudhe	100	*	100	—	*
Akinori Nishi	2,500	*	2,500	—	*
Alafi Capital Company, LLC(4)	3,542,885	12.1	3,542,885	—	*
Alan Mindel	250	*	250	—	*
Alexander Pancoe Trust DTD 9/2/86 Mariann Pancoe & Gladys Pancoe TTEES	50,000	*	50,000	—	*
Alexandria Equities, LLC(5)	1,283,856	4.4	1,283,856	—	*
Allen Fienberg, Ph.D.(6)	351,665	1.2	237,500	114,165	*
Allen M. Demby	4,723	*	4,723	—	*
Alzheimer Drug Discovery Foundation, Inc.	20,047	*	18,225	1,822	*
Andrew D. and Gloria Wahl	250	*	250	—	*
Andrew Rosen	5,000	*	5,000	—	*
Angus Nairn	7,500	*	7,500	—	*
Anthony Behette	4,509	*	4,509	—	*
Aron Galinovsky	500	*	500	—	*
Art II w/r/t Gwendoline Hoguet F/B/O Geoffrey R. Hoguet	82,876	*	82,876	—	*

Name of Beneficial Owner	Shares Beneficially Owned Before the Offering (#)	(%)(1)	Shares Being Offered (#)	Shares Beneficially Owned After the Offering (#)(1)(2) (3)	(%)(1) (2)
Ashnik Management, LLC	115	*	115	—	*
Avraham and Susan Tahari	6,055	*	6,055	—	*
Barry Fienberg	3,935	*	3,935	—	*
Barry Levine	1,600	*	1,600	—	*
BGF World HealthScience Fund(7)	174,133	*	174,133	—	*
BlackRock Health Sciences Opportunities Portfolio, a series of BlackRock Funds(8)	434,754	1.5	434,754	—	*
BlackRock Health Sciences Trust(9)	38,681	*	38,681	—	*
Brad Deering	763	*	763	—	*
Brian Leentjes	1,088	*	1,088	—	*
Britton Joint Recovable Trust	750	*	750	—	*
Broadfin Healthcare Master Fund, Ltd	325,009	1.1	325,009	—	*
Bruce and Bobra Locker Jt. WROS	100	*	100	—	*
Carlos Bermudez	1,510	*	1,510	—	*
Carol M. Mates	2,685	*	2,685	—	*
Charles H. Scholpp	1,000	*	1,000	—	*
Charles Sebestyen	100	*	100	—	*
Christopher D. Alafi as Trustee of The Moshe H. Alafi and Margaret E. Alafi Generation-Skipping Trust(10)	503,753	1.7	503,753	—	*
Claude Greengard	1,968	*	1,968	—	*
Dan Coombs and Mary Ellen Coombs	2,919	*	2,919	—	*
Daryl R. Schaller	3,000	*	3,000	—	*
David Fyfe	1,500	*	1,500	—	*
David Kipnis(11)	96,250	*	10,000	86,250	*
David M. Schwaber	41,726	*	41,726	—	*
David N. Sosland Trust A(12)	707,287	2.4	707,287	—	*
David T. Quinby	500	*	500	—	*
Deerfield Special Situations Fund, L.P.	93,794	*	93,794	—	*
Deerfield Special Situations International Master Fund, L.P.	77,329	*	77,329	—	*
Dennis C. Dean	100	*	100	—	*
Donald Wameldorph Jr.	1,004	*	1,004	—	*
Douglas P. Baker	250	*	250	—	*
Duncan M. Scott	100	*	100	—	*
Edward Cronin	100	*	100	—	*
Edward Lopez	100	*	100	—	*
Ellis R. Geulbeau	2,009	*	2,009	—	*
Eric J. Hinds	3,935	*	3,935	—	*
Eric Nestler	7,500	*	7,500	—	*
Erin Coffey	100	*	100	—	*
Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund(13)	99,050	*	99,050	—	*
Fidelity Mt. Vernon Street Trust: Fidelity Growth Company Fund(13)	1,820,260	6.2	999,560	820,700	2.8
Fidelity Select Portfolios: Biotechnology Portfolio(13)	1,482,850	5.1	900,510	582,340	2.0
Florence Kaufman	4,009	*	4,009	—	*
Franklin M. Berger	317,170	1.1	317,170	—	*

Name of Beneficial Owner	Shares Beneficially Owned Before the Offering (#)	(%)(1)	Shares Being Offered (#)	Shares Beneficially Owned After the Offering (#)(1)(2) (3)	(%)(1) (2)
G. Kenneth Baum Revocable Trust, under agreement dated Feb. 28, 1989, as amended	7,870	*	7,870	—	*
Gary Grenley	119	*	119	—	*
Gary L. Sturm	109	*	109	—	*
GC&H Investments	13,933	*	13,933	—	*
GC&H Investments LLC	135,347	*	135,347	—	*
George O'Conner Trust	1,009	*	1,009	—	*
George R. Martin	100	*	100	—	*
Gilberto Fisone	2,500	*	2,500	—	*
Greg Ryan	5,250	*	5,250	—	*
Gregory J. Coffey	100	*	100	—	*
Gretchen Snyder(14)	39,999	*	12,500	27,499	*
Hannah Gabrielle Pancoe Trust DTD 9/24/87 Michael S. Pancoe, Gladys Pancoe & Eleanor Pancoe TTEES	12,000	*	12,000	—	*
Harold Melcher Revocable Trust	3,148	*	3,148	—	*
Harold O. LaFlash and Greta G. LaFlash Revocable Trust	2,000	*	2,000	—	*
Henry Stronski and Jami L. Stronski	100	*	100	—	*
Hongwen Zhu	3,583	*	3,583	—	*
Howard K. Fuguet	755	*	755	—	*
Hudson Asset Partners, LLC	25,000	*	25,000	—	*
ING BlackRock Health Sciences Opportunities Portfolio(15)	52,912	*	52,912	—	*
J. Michael Bowman	750	*	750	—	*
J.D.F. Holdings Ltd.(16)	208,023	*	208,023	—	*
James and Jana Grinnan	105	*	105	—	*
James Bibb	2,500	*	2,500	—	*
James Colthurst	100	*	100	—	*
James O'Callaghan	5,000	*	5,000	—	*
James S. Murday	950	*	950	—	*
James Surmeier	7,500	*	7,500	—	*
Janice Blustein	1,968	*	1,968	—	*
Jeff Wilmes	1,075	*	1,075	—	*
Jill and Chris Manning	250	*	250	—	*
Joe and Loretta Pillari Jt. WROS	750	*	750	—	*
Joel S. Marcus and Barbara A. Marcus Family Trust(17)	15,742	*	15,742	—	*
John C. Tomesch and Kristine K. Tomesch	22,770	*	22,770	—	*
John R Bartos	100	*	100	—	*
John S. and Linda McPhee	2,000	*	2,000	—	*
Joseph C. and Jennifer J. Garone	2,500	*	2,500	—	*
Joseph H. McCall	3,000	*	3,000	—	*
Joseph Haim Heskel	15,742	*	15,742	—	*
Joseph P. Hendrick, Jr.	37,499	*	12,500	24,999	*
Joyce Bielski	100	*	100	—	*
Judy Reed Smith	100	*	100	—	*
Jules P. Devigne	100	*	100	—	*
Jules P. Devigne and Deborah G. Devigne	100	*	100	—	*

Name of Beneficial Owner	Shares Beneficially Owned Before the Offering (#)	(%)(1)	Shares Being Offered (#)	Shares Beneficially Owned After the Offering (#)(1)(2) (3)	(%)(1) (2)
Julia Lee Pancoe Trust DTD 2/25/83 E. Michael Pancoe, Gladys Pancoe & Eleanor Pancoe TTEES—FBO Julia Lee Pancoe	12,000	*	12,000	—	*
Karl Seck	250	*	250	—	*
Kenneth S. Pizzo Jr.	7,870	*	7,870	—	*
Kent Sullivan	1,263	*	1,263	—	*
Kevin C. McDonough	1,500	*	1,500	—	*
Kevin J. Surace	250	*	250	—	*
Klondike Resources, Inc.	163,123	*	163,123	—	*
Larry Gelbfish	100	*	100	—	*
Las Lomas Trust	100	*	100	—	*
Lawrence Goodman	500	*	500	—	*
Lawrence Hineline(18)	164,999	*	50,000	114,999	*
Lawrence P. Wennogle(19)	223,332	*	100,000	123,332	*
Leonard DeOliverra	1,500	*	1,500	—	*
Lerner Family Trust UAD 11/14/94(20)	37,500	*	37,500	—	*
Leslie F. Greengard	1,968	*	1,968	—	*
Leyla Greengard	1,968	*	1,968	—	*
Lloyd and Deborah Schill Jt. WROS	100	*	100	—	*
Louis Fienberg	3,935	*	3,935	—	*
Luigi Maneini	1,500	*	1,500	—	*
Lynn Frances Melcher Trust	3,148	*	3,148	—	*
Madeleine Behette	5,500	*	5,500	—	*
Marc Bielski and Heather Gordon-Bielski	100	*	100	—	*
Marc Flajolet	9,000	*	8,000	1,000	*
Marguerite Behette Hart	5,500	*	5,500	—	*
Mariann Pancoe Trust	8,080	*	8,080	—	*
Marilyn Blond Melcher Revocable Trust	3,148	*	3,148	—	*
Mark Cook	1,075	*	1,075	—	*
Mark Flaming	100	*	100	—	*
Marvin Mermelstein	1,000	*	1,000	—	*
Mary and David Boies	1,750	*	1,750	—	*
Mary Osbakken	250	*	250	—	*
Matthew Ross	2,000	*	2,000	—	*
Max Flaming	100	*	100	—	*
Max G. Johnson TTEE / Max Johnson Living Trust U/A 1/7/99	150	*	150	—	*
MCK Corporation	750	*	750	—	*
Michael Hafke	102	*	102	—	*
Michael J. and Jane M. Sullivan	1,000	*	1,000	—	*
Michael Pancoe Living Trust	8,080	*	8,080	—	*
Michael T. Smith	2,000	*	2,000	—	*
Mohammed S. Rais	750	*	750	—	*
Moshe Alafi (21)	15,742	*	15,742	—	*
Neponsit Properties LLC	100	*	100	—	*
New Ventures I, LLC(22)	240,955	*	212,384	28,571	*
New York Small Business Venture Fund II LLC	283,725	*	283,725	—	*
New York Small Business Venture Fund III LLC	233,371	*	233,371	—	*
NJTC Venture Fund SBIC, L.P.	935,390	3.2	935,390	—	*

Name of Beneficial Owner	Shares Beneficially Owned Before the Offering (#)	(%)(1)	Shares Being Offered (#)	Shares Beneficially Owned After the Offering (#)(1)(2) (3)	(%)(1) (2)
Paul Breglio	500	*	500	—	*
Paul Greengard, Ph.D.(23)	1,143,750	3.9	1,131,250	12,500	*
Paul Greengard Trust DTD 3/22/07 FBO Emerson Greengard Greeve(24)	250,000	*	250,000	—	*
Paul Greengard Trust DTD 10/31/01 FBO Delfine van Haarlem Greeve(24)	250,000	*	250,000	—	*
Paul Greengard Trust DTD 11/11/96 FBO Anne Blustein Greengard(24)	250,000	*	250,000	—	*
Paul Greengard Trust DTD 11/11/96 FBO Daniel Bijan Greengard(24)	250,000	*	250,000	—	*
Paul Greengard Trust DTD 11/11/96 FBO Philip Ramin Greengard(24)	250,000	*	250,000	—	*
Paul Greengard Trust DTD 12/7/98 FBO Natasha Marieke Greeve(24)	250,000	*	250,000	—	*
Paul Stern	100	*	100	—	*
Pedro M. Cuatrecasas	7,084	*	7,084	—	*
Peng Li	26,999	*	4,000	22,999	*
Per Svenningson	5,000	*	5,000	—	*
Peter A. Feinstein MD PC Profit Sharing PL FBO Peter A. Feinstein MD	100	*	100	—	*
Peter F. Stewart	750	*	750	—	*
Peter G. Schultz	7,500	*	7,500	—	*
Philip H. Lippel	250	*	250	—	*
R. Lea Bone	250	*	250	—	*
Ralph Gitz	100	*	100	—	*
Ralph Glasgal	1,000	*	1,000	—	*
Ralph T. Wood	1,250	*	1,250	—	*
Randy Perillo	102	*	102	—	*
Ray Crespo	100	*	100	—	*
Richard A. Melcher Revocable Trust	3,148	*	3,148	—	*
Richard H. Scheller	7,500	*	7,500	—	*
Robert C. Lannert Trust	100	*	100	—	*
Robert C. Brown	175	*	175	—	*
Robert Davis	45,000	*	25,000	20,000	*
Robert E. Cawthorn	7,870	*	7,870	—	*
Robert Garcia	1,078	*	1,078	—	*
Robert Kaufman	4,009	*	4,009	—	*
Rong Zheng	463	*	463	—	*
Rory Riggs(22)	11,806	*	11,806	—	*
Rossi Motors Inc. Ronald G. Rossi	1,500	*	1,500	—	*
Ruby Elizabeth Koch-Fienberg Trust dated December 21st 2007, made by Allen A. Fienberg as grantor with Louis Fienberg trustee(25)	25,000	*	25,000	—	*
Scott R. Runyan	100	*	100	—	*
Sharad and Chandrika Patel	175	*	175	—	*
Sharon Mates, Ph.D.(26)	1,391,430	4.7	1,053,935	337,495	1.1

Name of Beneficial Owner	Shares Beneficially Owned Before the Offering (#)	(%)(1)	Shares Being Offered (#)	Shares Beneficially Owned After the Offering (#)(1)(2) (3)	(%)(1) (2)
Shireen Michele Alafi, as Trustee of the Astrid Sophie Hovmoller Alafi GST Exempt Trust under The Christopher D. Alafi Generation-Skipping Trust under agreement dated October 12, 2012(27)	251,888	*	251,888	—	*
Shireen Michele Alafi, as Trustee of the Caroline Charlotte Hovmoller Alafi GST Exempt Trust under The Christopher D. Alafi Generation-Skipping Trust under agreement dated October 12, 2012(27)	251,888	*	251,888	—	*
So Young Jang	2,417	*	2,417	—	*
Sooner Ranch Investments, LP	100	*	100	—	*
Spencer A. and Susan L. Joyner Revocable Trust	509	*	509	—	*
Stefan Nowina	139	*	139	—	*
Steve Kontos	3,250	*	3,250	—	*
Steven B. Nakovich, Jr., Insurance Trust Dated 3-6-1981	108,176	*	108,176	—	*
Steven K. and Deborah S. Nelson	1,000	*	1,000	—	*
Steven Moger	2,000	*	2,000	—	*
Tamas Bartfai	2,500	*	2,500	—	*
Tanjn and Tina S. Obut	1,000	*	1,000	—	*
The Benjamin Trust	3,148	*	3,148	—	*
The George K. Baum Family Foundation	7,870	*	7,870	—	*
The Rockefeller University	400,000	1.4	400,000	—	*
The Sosland Family Trust B Partnership(12)	1,948,554	6.7	1,948,554	—	*
The Sosland Foundation(12)	732,548	2.5	732,548	—	*
Theo Vafakos	1,000	*	1,000	—	*
Thomas and Joy Licata	950	*	950	—	*
Thomas D. Paul	750	*	750	—	*
Thomas J. Jones III	1,000	*	1,000	—	*
Thomas Jefferson Jones	2,500	*	2,500	—	*
Thomas Mayberry	100	*	100	—	*
Timothy Brickle	100	*	100	—	*
Todd H. Tracey	100	*	100	—	*
Trevor P. Castor	250	*	250	—	*
Ursula Von Rydingsvard	3,935	*	3,935	—	*
Vincent Latour	1,523	*	1,523	—	*
Vinit Shah	2,333	*	2,333	—	*
Visium Balanced Master Fund, Ltd.	700,479	2.4	700,479	—	*
Vita Pure	100	*	100	—	*
Weeks & Leo Co. Inc.	100	*	100	—	*
William Huff	2,310	*	2,310	—	*
William Ristvedt	100	*	100	—	*
William W. Crossman	500	*	500	—	*
Wing Real Estate LLC	1,000	*	1,000	—	*
Yona Sofia Koch-Fienberg Trust dated December 21st 2007, made by Allen A. Fienberg as grantor with Louis Fienberg trustee(25)	25,000	*	25,000	—	*
Yonghong Guo	6,833	*	6,833	—	*
Total	**23,301,573**	—	**20,982,902**	—	—

* Less than 1%

(1) Applicable percentage ownership is based on 29,222,746 shares of our common stock outstanding as of April 15, 2014.

(2) Assumes the sale of all shares offered in this prospectus.

(3) Consists of options to purchase shares of common stock exercisable within 60 days of April 15, 2014 held by the selling stockholder, except for Alzheimer Drug Discovery Foundation, Inc., which consists of a warrant to purchase 1,822 shares of common stock which is immediately exercisable, and except as otherwise noted in the footnotes to this table.

(4) Christopher Alafi, Ph.D., one of our directors, and Moshe Alafi are managing partners of Alafi Capital Company, LLC, or Alafi Capital, and have shared voting and investment power with respect to the shares owned by Alafi Capital.

(5) Joel S. Marcus, one of our directors, is the Chairman, CEO and Founder of Alexandria Real Estate Equities, Inc., which is the managing member of Alexandria Equities, LLC, which has full voting and investment power with respect to the shares owned by Alexandria Equities, LLC. Alexandria Real Estate Equities, Inc. is a reporting company under the Exchange Act. As an officer of Alexandria Real Estate Equities, Inc., Mr. Marcus may be deemed to have voting and investment power with respect to the shares owned by Alexandria Equities, LLC. Mr. Marcus disclaims beneficial ownership of the shares held by Alexandria Equities, LLC, except to the extent of his underlying pecuniary interest therein.

(6) Allen A. Fienberg, Ph.D., is our Vice President of Business Development. Consists of 237,500 shares of common stock and options to purchase 114,165 shares of common stock which are exercisable within 60 days of April 15, 2014. Does not include: (i) 208,023 shares of common stock held by J.D.F. Holdings Ltd., in which Dr. Fienberg holds a 20% ownership interest; and (ii) 50,000 shares of common stock held by two trusts for the benefit of members of Dr. Fienberg's family. Dr. Fienberg has no voting or investment control with respect to any of the shares owned by J.D.F. Holdings Ltd. or held in the trusts.

(7) BlackRock, Inc. is the ultimate parent holding company of BlackRock Investment Management, LLC, the Investment Adviser of BGF World HealthScience Fund (the "BlackRock Fund I"). On behalf of BlackRock Investment Management, LLC, the Investment Adviser of the BlackRock Fund I, Erin Xie, as a Managing Director of BlackRock Investment Management, LLC, has voting and investment power over the referenced securities held by such fund. Erin Xie expressly disclaims beneficial ownership of all shares held by the BlackRock Fund I.

(8) BlackRock, Inc. is the ultimate parent holding company of BlackRock Advisors, LLC, the Investment Manager of BlackRock Health Sciences Opportunities Portfolio, a series of BlackRock Funds (the "BlackRock Fund II"). On behalf of BlackRock Advisors, LLC, the Investment Manager of the BlackRock Fund II, Erin Xie, as a Managing Director of BlackRock Advisors, LLC, has voting and investment power over the referenced securities held by such fund. Erin Xie expressly disclaims beneficial ownership of all shares held by the BlackRock Fund II.

(9) BlackRock, Inc. is the ultimate parent holding company of BlackRock Advisors, LLC, the Investment Adviser of BlackRock Health Sciences Trust (the "BlackRock Fund III"). On behalf of BlackRock Advisors, LLC, the Investment Adviser of the BlackRock Fund III, Erin Xie, as a Managing Director of BlackRock Advisors, LLC, has voting and investment power over the referenced securities held by such fund. Erin Xie expressly disclaims beneficial ownership of all shares held by the BlackRock Fund III.

(10) Christopher Alafi, Ph.D. is trustee of this trust and has full voting and investment power with respect to shares owned by the trust.

(11) Dr. Kipnis was a director of ITI from May 2002 until December 2012.

(12) Morton I. Sosland is Trustee of the David N. Sosland Trust A, Managing Partner of The Sosland Family Trust B Partnership and Vice Chairman of The Sosland Foundation, which we refer to collectively as the Sosland Holders. As such, Mr. Sosland has sole voting and investment power with respect to the shares held by the Sosland Holders.

(13) Based on the Schedule 13G/A filed by FMR LLC and its affiliates on February 10, 2014, reporting the amount of securities beneficially owned as of February 7, 2014. Fidelity Management & Research Company, or Fidelity, 82 Devonshire Street, Boston, Massachusetts 02109, a wholly-owned subsidiary of FMR LLC

and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, is the beneficial owner of 4,073,917 shares of common stock as a result of acting as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940. Edward C. Johnson 3d and FMR LLC, through its control of Fidelity, and the funds each has sole power to dispose of the 4,073,917 shares of common stock owned by the Funds. Members of the family of Edward C. Johnson 3d, Chairman of FMR LLC, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Edward C. Johnson 3d, Chairman of FMR LLC, has the sole power to vote or direct the voting of the shares owned directly by the Fidelity Funds, which power resides with the Funds' Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the Funds' Boards of Trustees.

(14) Consists of 17,500 shares of common stock held by Ms. Snyder and options to purchase 22,499 shares of common stock, which are exercisable within 60 days of April 15, 2014.

(15) BlackRock, Inc. is the ultimate parent holding company of BlackRock Advisors, LLC, the Sub-Adviser of ING BlackRock Health Sciences Opportunities Portfolio (the "BlackRock Fund IV"). On behalf of BlackRock Advisors, LLC, the Sub-Adviser of the BlackRock Fund IV, Erin Xie, as a Managing Director of BlackRock Advisors, LLC, has voting and investment power over the referenced securities held by such fund. Erin Xie expressly disclaims beneficial ownership of all shares held by the BlackRock Fund IV.

(16) Allen A. Fienberg, Ph.D., our Vice President of Business Development, holds a 20% ownership interest in shares held by J.D.F. Holdings Ltd. Dr. Fienberg has no voting or investment control with respect to any of the shares owned by J.D.F. Holdings Ltd.

(17) Consists of 15,742 shares of common stock held by the Joel S. Marcus and Barbara A. Marcus Family Trust. Mr. Marcus, who is one of our directors, may also be deemed to beneficially own shares held by Alexandria Equities, LLC described in footnote 5 above, as well as options to purchase 83,750 shares of common stock held by Mr. Marcus, which are exercisable within 60 days of April 15, 2014.

(18) Lawrence J. Hineline is our Vice President of Finance, Chief Financial Officer and Secretary. Consists of 50,000 shares of common stock and options to purchase 114,999 shares of common stock, which are exercisable within 60 days of April 15, 2014.

(19) Lawrence P. Wennogle, Ph.D. is our Vice President, Drug Discovery. Consists of 112,500 shares of common stock and options to purchase 110,832 shares of common stock, which are exercisable within 60 days of April 15, 2014.

(20) Richard Lerner, M.D., one of our directors, shares voting and investment control with respect to the shares held by the Lerner Family Trust UAD 11/14/94.

(21) Mr. Alafi may also be deemed to beneficially own the shares held by Alafi Capital described above. Mr. Alafi is a managing partner of Alafi Capital and shares voting and investment power with respect to the shares owned by Alafi Capital.

(22) Mr. Riggs is one of our directors and is Managing Member of New Ventures I, LLC. The shares listed as beneficially owned following the offering by New Ventures I, LLC consist of shares of common stock.

(23) Paul Greengard, Ph.D. is one of our founders. Does not include 1,500,000 shares of common stock held by six trusts for the benefit of members of Dr. Greengard's family, as the trustee of these trusts, Ursula von Rydingsvard, Dr. Greengard's spouse, has sole voting and investment control over the shares held by the trusts.

(24) See footnote 23.

(25) See footnote 6.

(26) Sharon Mates, Ph.D. is our Chairman, President and Chief Executive Officer. Consists of 1,053,935 shares of common stock and options to purchase 337,495 shares of common stock, which are exercisable within 60 days of April 15, 2014.

(27) This trust is for the benefit of members of the Alafi family. Neither Christopher Alafi, Ph.D., one of our directors, nor Moshe Alafi has voting or investment control with respect to shares owned by this trust.

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling

stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(a)(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(a)(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of the third anniversary of the date the registration statement is declared effective by the SEC (or, if later, the third anniversary of the date that all of the shares required to be registered by us have been included in the registration statement) and such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement.

DESCRIPTION OF CAPITAL STOCK

The following statements are qualified in their entirety by reference to the detailed provisions of our restated certificate of incorporation and restated bylaws.

Capital Structure

We currently have authorized capital stock of 105,000,000 shares, of which 100,000,000 shares are designated as common stock, par value $0.0001 per share, and 5,000,000 shares are designated as preferred stock, par value $0.0001 per share. As of April 15, 2014, 29,222,746 shares of our common stock and no shares of our preferred stock were issued and outstanding.

Common Stock

The holders of our common stock are entitled to one vote per share on matters on which our stockholders vote. There are no cumulative voting rights. Subject to any preferential dividend rights of any outstanding shares of preferred stock, holders of our common stock are entitled to receive dividends, if declared by our board of directors, out of funds that we may legally use to pay dividends. If we liquidate or dissolve, holders of our common stock are entitled to share ratably in our assets once our debts and any liquidation preference owed to any then-outstanding preferred stockholders are paid. Our restated certificate of incorporation does not provide our common stock with any redemption, conversion or preemptive rights.

Preferred Stock

If we issue preferred stock in the future, such preferred stock would have priority over common stock with respect to dividends and other distributions, including the distribution of assets upon liquidation. Our board of directors has the authority, without further stockholder authorization, to issue from time to time up to 5,000,000 shares of preferred stock in one or more series and to fix the terms, limitations, voting rights, relative rights and preferences and variations of each series. Although we have no present plans to issue any shares of preferred stock, the issuance of shares of preferred stock, or the issuance of rights to purchase such shares, could decrease the amount of earnings and assets available for distribution to the holders of common stock, could adversely affect the rights and powers, including voting rights, of the common stock, and could have the effect of delaying, deterring or preventing a change of control of us or an unsolicited acquisition proposal.

Warrant

As of April 15, 2014, we had one warrant outstanding to purchase 1,822 shares of our common stock at an exercise price of $6.0264 per share, which expires on April 19, 2023.

Registration Rights

On August 29, 2013, ITI entered into a registration rights agreement with the investors in a private placement and also the existing stockholders of ITI who agreed to become parties to certain provisions of the agreement or who choose to become parties in the future, which covers the 20,982,902 shares of our common stock being registered on the registration statement of which this prospectus forms a part. We assumed the registration rights agreement in connection with the Merger.

Resale Registration Rights

Pursuant to the registration rights agreement and subject to the rules and regulations of the SEC, we filed the registration statement of which this prospectus forms a part, covering the resale of the shares of our common stock held by the investors in the private placement that closed on August 29, 2013 and the shares of our

common stock held by the former stockholders of ITI who are parties to the agreement. The registration statement was originally declared effective on December 18, 2013.

Registration of these shares under the Securities Act has resulted in the shares becoming saleable under the Securities Act. Any sales of securities by holders of these shares could adversely affect the trading prices of our common stock.

We will be liable to each investor in the private placement (but not to the former stockholders of ITI who are parties to the agreement) for liquidated damages, on a 30-day basis, equal to 1.0% of the aggregate purchase price paid by the investor for the registrable shares of our common stock then held by the investor, subject to an overall cap of 5%, (i) if we suspend (subject to limited blackout periods described below) or terminate the registration statement prior to the date which is the earlier of (x) December 18, 2016 and (y) the date on which all of the registrable shares cease to be registrable shares, or (ii) in the event one or more suspensions of the effectiveness of the registration statement exceeds 60 days in the aggregate during any 12-month period. We will be permitted to suspend the registration statement one or more times during any 12-month period, provided such suspensions do not exceed 30 consecutive days or 60 days in the aggregate in any 12-month period. Any suspension associated with our filing of an annual, periodic or current report, as required by the Exchange Act, will be permitted and will not be counted against the 60 day limitation. Expenses with respect to the filing and effectiveness of such registration statement (but not selling expenses, or underwriter or agent compensation) will be paid by us, including expenses of one counsel for the selling stockholders.

Form S-3 Demand Registration Rights

Pursuant to the registration rights agreement, at any time after we become eligible to file a registration statement on Form S-3, subject to specified limitations set forth in the registration rights agreement, the holders of at least 12% of the registrable shares of common stock then outstanding may request that we register on Form S-3 all or a portion of the registrable shares so long as the total amount of the shares being registered have an anticipated aggregate offering price, net of selling expenses, of at least $7,500,000.

“Piggyback” Registration Rights

Pursuant to the registration rights agreement, if we propose to register any of our common stock in a firm commitment underwritten offering, the holders of registrable shares of our common stock will be entitled to notice of the registration and have the right to require us to register all or a portion of the registrable shares then held by them, subject to our right and the right of our underwriters to reduce the number of shares proposed to be registered in view of market conditions.

Expenses of Registration

We have agreed to pay all fees and expenses relating to the registration statement of which this prospectus forms a part, as well as all Form S-3 demand registrations and piggyback registrations, including up to $25,000 in fees of one special counsel of the investors in connection with the filing of the registration statement of which this prospectus forms a part.

Expiration of Registration Rights

The resale registration rights described above shall terminate upon the earlier of (1) the date on which all registrable shares have been effectively registered under the Securities Act and disposed of in accordance with such registration statement, and (2) the later of the third anniversary of the date (A) the registration statement of which this prospectus forms a part is declared effective (December 18, 2016) and (B) all registrable shares have been registered in the registration statement of which this prospectus forms a part.

Lock-Up Provisions in Registration Rights Agreement

The registration rights agreement contained lock-up provisions applicable to holders of our common stock that expired on April 30, 2014.

Anti-Takeover Effects of Delaware Law and Our Restated Certificate of Incorporation and Restated Bylaws

The provisions of Delaware law and our restated certificate of incorporation and restated bylaws could discourage or make it more difficult to accomplish a proxy contest or other change in our management or the acquisition of control by a holder of a substantial amount of our voting stock. It is possible that these provisions could make it more difficult to accomplish, or could deter, transactions that stockholders may otherwise consider to be in their best interests or in our best interests. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by the board of directors and to discourage certain types of transactions that may involve an actual or threatened change of our control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. Such provisions also may have the effect of preventing changes in our management.

Delaware Statutory Business Combinations Provision

We are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law. Section 203 prohibits a publicly-held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. For purposes of Section 203, a "business combination" is defined broadly to include a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder, and, subject to certain exceptions, an "interested stockholder" is a person who, together with his or her affiliates and associates, owns, or within three years prior, did own, 15% or more of the corporation's voting stock.

Classified Board of Directors; Removal of Directors for Cause

Pursuant to our restated certificate of incorporation and restated bylaws, our board of directors is divided into three classes, with the term of office of the first class to expire at the first annual meeting of stockholders following the initial classification of directors, the term of office of the second class to expire at the second annual meeting of stockholders following the initial classification of directors, and the term of office of the third class to expire at the third annual meeting of stockholders following the initial classification of directors. At each annual meeting of stockholders, directors elected to succeed those directors whose terms expire, other than directors elected by the holders of any series of preferred stock under specified circumstances, will be elected for a three-year term of office. All directors elected to our classified board of directors will serve until the election and qualification of their respective successors or their earlier resignation or removal. Members of the board of directors may only be removed for cause and only by the affirmative vote of at least 80% of our outstanding voting stock. These provisions are likely to increase the time required for stockholders to change the composition of the board of directors. For example, at least two annual meetings will be necessary for stockholders to effect a change in a majority of the members of the board of directors.

Advance Notice Provisions for Stockholder Proposals and Stockholder Nominations of Directors

Our restated bylaws provide that, for nominations to the board of directors or for other business to be properly brought by a stockholder before a meeting of stockholders, the stockholder must first have given timely notice of the proposal in writing to our Secretary. For an annual meeting, a stockholder's notice generally must be delivered not less than 90 days nor more than 120 days prior to the first anniversary of the previous year's annual meeting date. For a special meeting, the notice must generally be delivered not earlier than the 90th day

prior to the meeting and not later than the later of (1) the 60th day prior to the meeting or (2) the 10th day following the day on which public announcement of the meeting is first made. Detailed requirements as to the form of the notice and information required in the notice are specified in the restated bylaws. If it is determined that business was not properly brought before a meeting in accordance with our bylaw provisions, such business will not be conducted at the meeting.

Special Meetings of Stockholders

Special meetings of the stockholders may be called only by our board of directors pursuant to a resolution adopted by a majority of the total number of directors.

No Stockholder Action by Written Consent

Any action to be effected by our stockholders must be effected at a duly called annual or special meeting of the stockholders.

Super Majority Stockholder Vote Required for Certain Actions

The Delaware General Corporation Law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless the corporation's certificate of incorporation or bylaws, as the case may be, require a greater percentage. Our restated certificate of incorporation requires the affirmative vote of the holders of at least 80% of our outstanding voting stock to amend or repeal any of the provisions discussed in this section of this prospectus entitled "Anti-Takeover Effects of Delaware Law and Our Restated Certificate of Incorporation and Restated Bylaws." This 80% stockholder vote would be in addition to any separate class vote that might in the future be required pursuant to the terms of any preferred stock that might then be outstanding. An 80% vote is also required for any amendment to, or repeal of, our restated bylaws by the stockholders. Our restated bylaws may be amended or repealed by a simple majority vote of the board of directors.

Indemnification of Directors and Officers

Our restated certificate of incorporation and our restated bylaws provide that each person who was or is made a party or is threatened to be made a party to or is otherwise involved (including, without limitation, as a witness) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was one of our directors or officers or is or was serving at our request as a director, officer, or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan, whether the basis of such proceeding is alleged action in an official capacity as a director, officer or trustee or in any other capacity while serving as a director, officer or trustee, shall be indemnified and held harmless by us to the fullest extent authorized by the Delaware General Corporation Law against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such.

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

corporation, except that no indemnification shall be provided if such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the Delaware Chancery Court or the court in which the action or suit was brought shall determine that such person is fairly and reasonably entitled to indemnity for such expenses despite such adjudication of liability.

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

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

We have entered into indemnification agreements with our directors and certain officers, in addition to the indemnification provided in our restated certificate of incorporation and our restated bylaws, and intend to enter into indemnification agreements with any new directors and executive officers in the future. We have purchased and intend to maintain insurance on behalf of any person who is or was a director or officer against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

In addition, as a condition to the Merger, we also entered into an indemnity agreement with the former officer and director of Oneida Resources Corp., the public shell corporation prior to the Merger, pursuant to which we agreed to indemnify such former officer and director for actions taken by him in his official capacity relating to the consideration, approval and consummation of the Merger and certain related transactions.

The foregoing discussion of our restated certificate of incorporation, restated bylaws, indemnification agreements, indemnity agreement, and Delaware law is not intended to be exhaustive and is qualified in its entirety by such restated certificate of incorporation, restated bylaws, indemnification agreements, indemnity agreement, or law.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A., with offices at 250 Royall Street, Canton, Massachusetts 02021.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus has been passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts.

EXPERTS

Ernst & Young LLP, independent registered accounting firm, has audited our financial statements at December 31, 2013 and 2012, and for the years then ended, as set forth in their report. We have incorporated by reference our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Exchange Act, and are required to file annual, quarterly and current reports, proxy statements, information statements and other information with the SEC. You may read and copy this information, for a copying fee, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549 on official business days during the hours of 10:00 a.m. to 3:00 p.m. Please call the SEC at 1-800-SEC-0330 for more information on its Public Reference Room. Our SEC filings are also available to the public from commercial document retrieval services, and at the website maintained by the SEC at http://www.sec.gov.

We also maintain a website at http://www.intracellulartherapies.com, through which you can access our filings with the SEC. Information contained on or accessible from our website does not constitute part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and the securities, including exhibits and schedules. You can obtain a copy of the registration statement from the SEC at any address listed above or from the SEC's website.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus information that we have filed with the SEC. This means we can disclose important information to you by referring you to other documents that contain that information. The information incorporated by reference is considered part of this prospectus. We incorporate by reference the documents listed below:

(1) Our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 that we filed with the SEC on March 25, 2014;

(2) Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2014 that we filed with the SEC on May 5, 2014;

(3) Our Current Reports on Form 8-K that we filed with the SEC on January 7, 2014, January 10, 2014, February 5, 2014, March 4, 2014, March 25, 2014, April 7, 2014 and May 5, 2014 (except for the information furnished under Items 2.02 or 7.01 and the exhibits furnished thereto);

(4) the description of our common stock contained in our Registration Statement on Form 8-A filed on January 24, 2014, including any amendment or report filed for the purpose of updating such description; and

(5) all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the termination or completion of the offering of securities under this prospectus shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing such reports and other documents.

The SEC file number for each of the documents listed above that were filed on or after January 24, 2014 is 001-36274. The SEC file number for each of the documents listed above that were filed prior to January 24, 2014 is 000-54896.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of these documents, orally or in writing, which will be provided to you at no cost, by contacting:

Intra-Cellular Therapies, Inc.
3960 Broadway
New York, New York 10032
Attention: Investor Relations
Telephone: (212) 923-3344

You may also access these documents on our website, http://www.intracellulartherapies.com.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth the fees and expenses incurred and to be incurred in connection with the registration of the securities being registered hereby, all of which will be borne by us. Except for the SEC registration fee, all amounts are estimates.

Description	Amount
SEC registration fee	$ 19,031
Printing expense	7,823
Accounting fees and expenses	154,250
Legal fees and expenses	180,000
Total expenses	$361,104

Item 15. Indemnification of Directors and Officers

Delaware Law

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses, including attorneys' fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Amended and Restated Certificate of Incorporation and Restated Bylaws

Our restated certificate of incorporation and restated bylaws provide that we shall indemnify, to the fullest extent authorized by the Delaware General Corporation Law, each person who is involved in any litigation or other proceeding because such person is or was a director or officer of Intra-Cellular Therapies, Inc. or is or was serving as an officer or director of another entity at our request, against all expense, loss or liability reasonably incurred or suffered in connection therewith. Our restated certificate of incorporation and restated bylaws also provide that the right to indemnification includes the right to be paid expenses incurred in defending any proceeding in advance of its final disposition, provided, however, that such advance payment will only be made upon delivery to us of an undertaking, by or on behalf of the director or officer, to repay all amounts so advanced if it is ultimately determined that such director is not entitled to indemnification. If we do not pay a proper claim for indemnification in full within 60 days after we receive a written claim for such indemnification, except in the

case of a claim for an advancement of expenses, in which case such period is 20 days, our restated certificate of incorporation and our restated bylaws authorize the claimant to bring an action against us and prescribe what constitutes a defense to such action.

Our restated certification of incorporation eliminates the liability of a director to us or our stockholders for monetary damages for such a breach of fiduciary duty as a director, except for liabilities arising:

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

Indemnification Agreements

We have entered into indemnification agreements with our directors and certain officers, in addition to the indemnification provided in our restated certificate of incorporation and our restated bylaws, and intend to enter into indemnification agreements with any new directors and executive officers in the future. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

In addition, we entered into an indemnity agreement with our former officer and director pursuant to which we agreed to indemnify such former officer and director for actions taken by him in his official capacity relating to the consideration, approval and consummation of the Merger and certain related transactions.

We have purchased and intend to maintain insurance on behalf of any person who is or was a director or officer against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

The foregoing discussion of our restated certificate of incorporation, restated bylaws, indemnification agreements, indemnity agreement, and Delaware law is not intended to be exhaustive and is qualified in its entirety by such restated certificate of incorporation, restated bylaws, indemnification agreements, indemnity agreement, or law.

Item 16. Exhibits

See the Exhibit Index on the page immediately preceding the exhibits for a list of exhibits filed as part of this registration statement, which Exhibit Index is incorporated herein by reference.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

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

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

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement.

Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

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

Provided, however, that: Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser: each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Post-Effective Amendment No. 2 to this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on May 5, 2014.

INTRA-CELLULAR THERAPIES, INC.

By: /s/ Sharon Mates, Ph.D.
Sharon Mates, Ph.D.
Chairman, President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this Post-Effective Amendment No. 2 to this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Sharon Mates, Ph.D. Sharon Mates, Ph.D.	Chairman, President and Chief Executive Officer (principal executive officer)	May 5, 2014
/s/ Lawrence J. Hineline Lawrence J. Hineline	Vice President of Finance, Chief Financial Officer and Secretary (principal financial officer and principal accounting officer)	May 5, 2014
* Christopher Alafi, Ph.D.	Director	May 5, 2014
* Richard Lerner, M.D.	Director	May 5, 2014
* Joel S. Marcus	Director	May 5, 2014
* Sir Michael Rawlins, M.D., FRCP, FMedSci	Director	May 5, 2014
* Rory B. Riggs	Director	May 5, 2014
* Robert L. Van Nostrand	Director	May 5, 2014
*By: /s/ Sharon Mates, Ph.D. Sharon Mates, Ph.D. Attorney-in-fact		May 5, 2014

EXHIBIT INDEX

Exhibit Number		Exhibit Description	Filed Herewith	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/ Reg. Number
2.1		Agreement and Plan of Merger, dated as of August 23, 2013, by and among the Registrant, ITI, Inc. and Intra-Cellular Therapies, Inc.		8-K (Exhibit 2.1)	8/29/2013	000-54896
2.2		Agreement and Plan of Merger, dated as of August 29, 2013, by and between the Registrant and Intra-Cellular Therapies, Inc., relating to the name change of the Registrant.		8-K (Exhibit 2.2)	9/5/2013	000-54896
4.1		Restated Certificate of Incorporation of the Registrant, filed with the Secretary of State of the State of Delaware on November 7, 2013.		S-1/A (Exhibit 3.1)	11/26/2013	333-191238
4.2		Certificate of Merger relating to the Merger of ITI, Inc. with and into Intra-Cellular Therapies, Inc., filed with the Secretary of State of the State of Delaware on August 29, 2013.		8-K (Exhibit 3.3)	9/5/2013	000-54896
4.3		Certificate of Ownership and Merger relating to the Merger of Intra-Cellular Therapies, Inc. with and into the Registrant, filed with the Secretary of State of the State of Delaware on August 29, 2013, relating to the name change of the Registrant.		8-K (Exhibit 3.4)	9/5/2013	000-54896
4.4		Restated Bylaws of the Registrant.		8-K (Exhibit 3.5)	9/5/2013	000-54896
4.5		Form of common stock certificate.		8-K (Exhibit 4.1)	9/5/2013	000-54896
4.6	.1	Warrant to Purchase Common Stock dated April 19, 2013 issued to Alzheimer Drug Discovery Foundation, Inc.		8-K (Exhibit 4.2.1)	9/5/2013	000-54896
	.2	Amendment dated August 29, 2013 to Warrant to Purchase Common Stock dated April 19, 2013 issued to Alzheimer Drug Discovery Foundation, Inc.		8-K (Exhibit 4.2.2)	9/5/2013	000-54896

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/ Reg. Number
4.7	Registration Rights Agreement dated as of August 29, 2013 by and among Intra-Cellular Therapies, Inc., the stockholders named therein and the Registrant.		8-K (Exhibit 10.19)	9/5/2013	000-54896
5.1	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.		S-1 (Exhibit 5.1)	9/18/2013	333-191238
23.1	Consent of Ernst & Young LLP.	X			
23.2	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1).				
24.1	Power of Attorney (included on signature pages to the Registrant's Form S-1 filings on September 18, 2013 and March 31, 2014).				

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Post-effective Amendment No. 2 to the Registration Statement (Form S-1 on Form S-3, No. 333-191238) and related Prospectus of Intra-Cellular Therapies, Inc. for the registration of 20,982,902 shares of its common stock and to the incorporation by reference therein of our report dated March 25, 2014, with respect to the consolidated financial statements of Intra-Cellular Therapies, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2013, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP
McLean, VA
May 5, 2014