CHAMPIONS ONCOLOGY, INC.
Form 424B3
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Registration No. 333-204050

PROSPECTUS

Champions Oncology, Inc.

35,271,052 shares of Common Stock

19,399,078 shares of Common Stock issuable upon the exercise of Warrants

This prospectus relates to the resale by certain selling security holders of Champions Oncology, Inc. of up to 54,670,130 shares of our common stock in connection with the resale of:

- up to 35,271,052 shares of common stock issued to certain of the selling security holders in the registrant's private placement offering that occurred on March 13, 2015; and

- up to 19,399,078 shares of common stock issuable upon the exercise of warrants issued to certain selling security holders in the offering that occurred on March 13, 2015.

The selling security holders may offer to sell the shares of common stock being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices, or at negotiated prices. We do not know when or in what amount the selling security holders may offer the securities for sale. The selling security holders may sell any, all or none of the securities offered by this prospectus. We provide more information about how the selling security holders may sell or otherwise dispose of their shares of common stock in the section entitled "Plan of Distribution." The selling security holders will pay all brokerage fees and commissions and similar expenses. We will pay all expenses (except brokerage fees and commissions and similar expenses) relating to the registration of the shares with the Securities and Exchange Commission.

We will not receive proceeds from the sale of shares by the selling security holders. Any proceeds received by us from the exercise of warrants by the selling security holders will be used for general corporate purposes. The selling security holders and any brokers executing sell orders on behalf of the selling security holders may be deemed to be "underwriters" within the meaning of the Securities Act of 1933, as amended (the "Securities Act"). Commissions received by a broker executing sell orders may be deemed to be underwriting commissions under the Securities Act.

Our common stock is presently quoted on the OTC QB under the symbol "CSBR." On May 6, 2015, the last reported sale price for our common stock on the OTC QB was $0.62 per share.

Investing in our securities involve significant risks. See "Risk Factors" beginning on page 10 to read about factors you should consider before buying shares of the common stock.

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

This prospectus is dated May **19, 2015**

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CHAMPIONS ONCOLOGY, INC. HAS NOT REGISTERED THE SHARES OF COMMON STOCK THAT MAY

BE SOLD BY THE SELLING SECURITY HOLDERS UNDER THE SECURITIES LAWS OF ANY STATE. SELLING SECURITY HOLDERS, AND ANY BROKERS OR DEALERS, EFFECTING TRANSACTIONS IN THE SHARES SHOULD CONFIRM THAT THE SHARES HAVE BEEN REGISTERED UNDER THE SECURITIES LAWS OF THE STATE OR STATES IN WHICH SALES OF THE SHARES OCCUR AS OF THE TIME OF SUCH SALES, OR THAT THERE IS AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES LAWS OF SUCH STATES.

THIS PROSPECTUS IS NOT AN OFFER TO SELL ANY SECURITIES OTHER THAN THE SHARES OF COMMON STOCK FOR SALE BY THE SELLING SECURITY HOLDERS. THIS PROSPECTUS IS NOT AN OFFER TO SELL SECURITIES IN ANY CIRCUMSTANCES IN WHICH SUCH AN OFFER IS UNLAWFUL.

You should rely only on the information contained in this prospectus or in any free writing prospectus that we may specifically authorize to be delivered or made available to you. We have not, and the selling security holders have not, authorized anyone to provide you with any information other than that contained in this prospectus or in any free writing prospectus we may authorize to be delivered or made available to you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus may only be used where it is legal to offer and sell shares of our common stock. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

We are not making an offer of these securities in any jurisdiction where the offer is not permitted. For investors outside the United States: We have not 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.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. Such forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets or future development and/or otherwise are not statements of historical fact. These forward-looking statements are based on our current expectations and projections about future events and they are subject to risks and uncertainties known and unknown that could cause actual results and

developments to differ materially from those expressed or implied in such statements.

In some cases, you can identify forward-looking statements by terminology, such as “expects,” “anticipates,” “intends,” “estimates,” “plans,” “believes,” “seeks,” “may,” “should”, “could” or the negative of such terms or other similar expressions. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this prospectus.

You should read this prospectus and the documents that we reference herein and therein and have filed as exhibits to the registration statement, of which this prospectus is part, completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. These risks and uncertainties, along with others, are described above under the heading “Risk Factors.” Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this prospectus, and particularly our forward-looking statements, by these cautionary statements.

This prospectus also includes estimates of market size and industry data that we obtained from industry publications and surveys and internal company sources. The industry publications and surveys used by management to determine market size and industry data contained in this prospectus have been obtained from sources believed to be reliable.

PROSPECTUS SUMMARY

This summary highlights the information contained elsewhere in or incorporated by reference into this prospectus. This summary does not contain all of the information that you should consider before deciding whether to exercise your subscription rights. You should carefully read this entire prospectus, including the information under the heading "Risk Factors," and the documents incorporated by reference into this prospectus, which are described under the heading "Incorporation of Certain Information by Reference." In this prospectus, all references to the "Company," "Champions Oncology" "we," "us" and "our" refer to Champions Oncology, Inc., a Delaware corporation, unless the contex otherwise requires or where otherwise indicated.

Company Overview

Champions Oncology, Inc. is engaged in the development and sale of advanced technology solutions and products to personalize the development and use of oncology drugs. The Company's TumorGraft Technology Platform is a novel approach to personalizing cancer care, based upon the implantation of human tumors in immune-deficient mice. The Company uses this technology, in conjunction with related services, to offer solutions for two customer groups:

- Our Personalized Oncology Solutions, or POS, business, which provides services to physicians and patients looking for information to help guide the development of personalized treatment plans.
- Our Translational Oncology Solutions, or TOS, business, which provides services to pharmaceutical and biotechnology companies seeking personalized approaches to drug development that will lower costs and increase the speed of developing new drugs, as well as increase the adoption of existing drugs.

TumorGraft Technology Platform

Our technology platform consists of processes, physical tumors, and information that we use to personalize the development and use of oncology drugs. Our process technology, which we call "TumorGrafts," involves the:

- implantation of human tumor fragments in immune-deficient mice;
- expansion of the original human tumor into a larger colony of mice through the passage of the tumor to a limited number of generations of mice;
- treatment of the implanted mice with oncology drugs; and
- measurement of tumor growth inhibition in treated mice relative to a control group of mice to determine the response of the tumor to the drug.

Our process is used for our POS business to test numerous drugs or drug combinations against a single patient's tumor in the mice to determine which therapy results in the most efficacious response from the tumor.

Our technology platform also includes a bank of tumors that we have acquired, collected, processed, validated, and stored for use in our TOS business, which we call our TumorBank. We implant these tumors in mice to provide pharmaceutical and biotechnology companies the opportunity to test oncology compounds on multiple tumors to test efficacy and simulate the results of human clinical trials.

We are also developing an extensive database of information about the tumors in our TumorBank. We expect that this database will include certain information about the patient (e.g. age, gender), the response of the tumors to different oncology drugs or drug combinations, mutational status of key oncogenes, and other genetic and epigenetic data about each tumor. Our intention is to use this database to provide our pharmaceutical and biotechnology customers with information that may assist them with their drug development process.

Our Strategy

Our strategy is to use TumorGrafts as a platform technology to drive multiple synergistic revenue streams. We continue to build this platform with investments in research and development. Our goal is to populate our TumorBank and its related database with tumors and information we receive from our POS business, research collaborations and validation studies. The tumors and information in the TumorBank are then available for TOS studies. We believe that the result is well-differentiated products for patients, physicians, and drug development companies. In addition, we are looking for additional opportunities to utilize the data we are gathering about the tumors to develop proprietary biomarkers and signatures of response that can predict the resistance or sensitivity of individual patients to oncology drugs.

Personalized Oncology Solutions Business

Our POS business offers physicians and patients information to help guide the development of personalized treatment plans. Our core products, TumorGraft implants and drug panels, previously known as studies, utilize TumorGraft technology to empirically test the response of a patient's tumor to multiple oncology drugs or drug combinations. The process begins by implanting a fresh fragment of the patient's tumor, typically received within 24 hours of surgery or biopsy, in a small colony of immune-deficient mice to grow the tumor tissue. This colony is then expanded by reimplanting the grown tumor tissue from the first generation of mice into an increasing number of second generation of mice until a sufficient number of implanted mice with the individual patients' tumor are available for testing. At that point, the colony is randomized into different groups, and studies are performed on the mice whereby each mouse in a group is dosed with a different drug or drug combination. The response of the tumor in each mouse is tracked over time and analyzed to determine which drug or drug combination is providing the highest level of tumor growth inhibition in the mice. Our data, which is currently limited in nature, indicates that there may be a correlation between the response to drugs of a tumor in a mouse with the response to drugs of a tumor in a patient.

In addition to our core TumorGraft POS services, we offer non-core related POS services to our customers, including personalized tumor boards, previously known as tumor panels, and gene sequencing. Personalized tumor boards are designed to provide access to oncologists with expertise in particular tumor types. These tumor boards can be done in person or by teleconference and can include from three to more than 15 physicians. The physicians on the tumor board receive an overview of the patient's history of treatment and current status, typically from the treating physician. The tumor board physicians may also receive the results of advanced molecular and sensitivity testing of the patient's tumor, which may include information based on our TumorGraft testing. Based on their expertise and the research information available to them from their academic institutions and colleagues, these physicians can offer useful insight into possible treatments. We also provide gene sequencing that analyzes the genetic makeup of patient's tumor for the purpose of identifying potentially useful drugs. We will continue to offer related personal oncology products to our customers; however, we expect future POS revenues to be driven by our core products.

We rely on the internet, word of mouth, and a small sales force to market these services to patients and physicians.

Translational Oncology Solutions Business

Our TOS business utilizes our technology platform to assist pharmaceutical and biotechnology companies with their drug development process. We provide studies, or license tumors for use in studies, that we believe may predict the efficacy of experimental oncology drugs or approved drugs as stand-alone therapies or in combination with other drugs and can stimulate the results of human clinical trials. These studies include in vivo studies that rely on implanting multiple tumors from our TumorBank in mice and testing the therapy of interest on these tumors. Studies may also include bioinformatics analyses that reveal the differences in the genetic signatures of the tumors that responded to a therapy as compared to the tumors that did not respond. Our studies can be used to determine which types of cancer, if any, may be inhibited by a drug. The studies can also be used to identify specific sub-populations, often characterized by particular genetic mutations that are differentially sensitive or resistant to a drug or drug combination. These studies, used in pre-clinical testing or during phase I or II of a clinical trial, can help guide the clinical development path of new compounds or find new indications or combinations for compounds that are already approved by the United States Food and Drug Administration, or FDA. We believe that the results may lead to lower costs and shorter timeframes for drug development.

Our sales and marketing efforts are dependent on a dedicated sales force that sells directly to pharmaceutical and biotechnology companies.

Operations and Recent Developments

On July 30, 2013, the Company entered into an agreement with Teva Pharmaceutical Industries Ltd., pursuant to which the Company agreed to conduct TumorGraft studies on multiple proprietary chemical compounds provided by Teva to determine the activity or response of these compounds in potential clinical indications. Under the agreement, Teva agreed to pay an upfront payment and, under certain conditions, pay the Company various amounts upon achieving certain milestones, based on the performance of the compounds in preclinical testing and dependent upon testing the compound in clinical settings and obtaining FDA approval. In addition, Teva agreed to pay the Company royalties on any commercialized products developed under the agreement. This agreement terminated a prior collaborative agreement between Cephalon, Inc. a wholly-owned subsidiary of Teva, and the Company. For the year ended April 30, 2014, revenue of $194,000 were recognized related to this agreement.

In-licensed Compounds

In February 2010, the Company entered into an exclusive option agreement with a Canadian company. The option agreement granted the Company the exclusive right to review Irinophore C, a nanoparticle drug compound, for the treatment of various forms of cancer, including melanoma, prostate, breast, and lung cancer. As of June 26, 2014 the Company terminated its exclusive option agreement.

Competition

Our TumorGraft Technology Platform is proprietary and requires significant know-how to both initiate and operate, but is not patented. It is, therefore, possible for competitors to develop other implantation procedures or to discover the same procedures utilized by the Company that could compete with the Company in its market. Competition in our industry is intense and based significantly on scientific, technological, and market forces, which include the effectiveness of the technology and products and the ability to commercialize technological developments. The Company faces significant competition from other healthcare companies in the United States and abroad. The majority of these competitors are, and will be, substantially larger than the Company, and have substantially greater resources and operating histories. There can be no assurance that developments by other companies will not render our products or technologies obsolete or non-competitive or that we will be able to keep pace with the technological or product developments of our competitors. These companies, as well as academic institutions, governmental agencies, and private research organizations also compete with us in recruiting and retaining highly qualified scientific, technical and professional personnel and consultants.

Research and Development

We continue to expand our TumorBank through the acquisition of tumor tissue and implanted models from the POS business. In addition, we expect to grow our tumor bank through research collaborations and relationships with hospitals and academic institutions. Our research and development efforts were focused on increasing our understanding of our TumorGraft models, their clinical predictability, improving growth and tumor take rates, and other biological and molecular characteristics of the models.

Government Regulation

The research, development, and marketing of our products, the performance of our POS testing services, and the operation of our facilities are generally subject to federal, state, local, or foreign legislation, including licensure of our laboratory located in Baltimore, Maryland by the States of Maryland and New York, and compliance with federal, state, local or foreign legislation applicable to the use of live animals in scientific testing, research and education.

The FDA has claimed regulatory authority over laboratory developed tests such as our POS services, but has generally not exercised it. The FDA has announced regulatory and guidance initiatives that could increase federal regulation of our business. We are subject to federal and international regulations with regard to shipment of hazardous materials, including the Department of Transportation and the International Air Transit Authority. These regulations require interstate, intrastate, and foreign shipments comply with applicable labeling, documentation, and training requirements.

Employees

As of April 30, 2015, we had 68 full-time equivalent employees (FTEs), including 26 with doctoral or other advanced degrees. Of our workforce, 43 FTEs are engaged in research and development and laboratory operations, 18 FTEs are engaged in sales and marketing, and 7 FTEs are engaged in finance and administration. None of our employees are represented by a labor union or covered by collective bargaining agreements. We have never experienced a work stoppage and believe our relationship with our employees is good.

Risk Associated with Our Business

Our business is subject to numerous risks and uncertainties, including those highlighted in the section titled "Risk Factors" immediately following this prospectus summary. These risks include, but are not limited to, the following:

- We historically incurred losses from operating activities, expect losses for the foreseeable future, require significant capital and may never achieve profitability.
- We may not be able to maintain or increase our revenues due to our reduction in POS service prices, the length of time it takes to conduct TumorGrafts, the uncertainty of whether TumorGrafts will successfully implant and the limited information about the correlation between the response to drugs of a tumor in mice with the response to those drugs of the tumor in patients.
- Our business could be adversely impacted by changes in the FDA's regulations.
- Our laboratory is subject to regulation and licensure requirements, and the healthcare industry is highly regulated; we may face substantial penalties, and our business activities may be impacted, if we fail to comply.
- If our laboratory facility is damaged or destroyed, we have a dispute with our landlord, or our mice population has a health crisis, our business would be negatively affected.
- We have limited experience marketing and selling our products and may need to rely on third parties to successfully market and sell our products and generate revenues.
- We will continue to be dependent upon key employees.
- Because our industry is very competitive and many of our competitors have substantially greater capital resources and more experience in research and development, we may not succeed in selling or increasing sales of our products and technologies.
- If we are unable to protect our intellectual property, we may not be able to compete as effectively.
- Claims by others that our products infringe their patents or other intellectual property rights could adversely affect our financial condition.
- Insiders own a significant amount of the outstanding common stock.

Company History

Our predecessor was incorporated under the laws of the State of Delaware on June 4, 1985, as "International Group, Inc." In September 1985, we completed a public offering and shortly thereafter, acquired the world-wide rights to the Champions sports-theme restaurant concept and changed our name to "Champions Sports, Inc." In November 1997, we sold our Champions service mark and concept to Marriott International, Inc. and until 2005, were a consultant to Marriott International, Inc. and operated one Champions sports bar restaurant. In January 2007, we changed our business direction to focus on biotechnology and subsequently changed our name to Champions Biotechnology, Inc. In April 2011, we changed our name to Champions Oncology, Inc. to reflect the Company's new strategic focus on developing advanced technologies to personalize the development and use of oncology drugs.

Available Information

Our internet website address is www.championsoncology.com. Information on our website is not part of this Prospectus. Through our website, we make available, free of charge, access to all reports filed with the United States Securities and Exchange Commission, or SEC, including our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K, our Proxy Statements on Schedules 14A and amendments to those reports, as filed with or furnished to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Copies of any materials we file with, or furnish to, the SEC can also be obtained free of charge through the SEC's website at http://www.sec.gov or at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

Company Information

Our corporate headquarters are located at One University Plaza, Suite 307, Hackensack, NJ 07601. Our telephone number is (201) 808-8400.

The Offering

Common stock that may be offered by the selling security holders:	Up to 35,271,052 shares of common stock
Total shares of common stock outstanding(1)	104,425,103shares.
Number of shares of common stock issuable upon the exercise of warrants held by the selling security holders:	Up to 19,399,078 shares
Use of Proceeds	We will not receive any of the proceeds from the sale of our shares by the selling security holders. Any proceeds received by us from the exercise of warrants by the selling security holders will be used for general corporate purposes. See “Use of Proceeds” on page 15.
Risk Factors	See “Risk Factors” beginning on page 10 and the other information included in this prospectus for a discussion of factors you should carefully consider before investing in our securities.
OTC Bulletin Board trading symbol	CSBR

(1) The number of shares of our common stock outstanding is based on the number of shares of our common stock outstanding as of April 30, 2015. This number does not include, as of April 30, 2015:

· 25,318,082 shares of our common stock issuable upon exercise of outstanding warrants, with a weighted average exercise price of $0.48 per share;

· 24,048,019 shares of our common stock issuable upon exercise of outstanding options, with a weighted average exercise price of $0.48 per share;

- 400,000 shares of our common stock issuable upon the vesting of restricted stock units; and
- 5,951,981 shares of our common stock available for future grants under our 2010 Equity Incentive Plan.

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RISK FACTORS

Any investment in our common stock involves a high degree of risk. Investors should carefully consider the risks described below and all of the information contained in this prospectus before deciding whether to purchase our common stock. Our business, financial condition or results of operations could be materially adversely affected by these risks if any of them actually occur. This prospectus also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks we face as described below and elsewhere in this prospectus.

We historically incurred losses from operating activities, expect losses for the foreseeable future, require significant capital and may never achieve profitability.

For the years ended April 30, 2014 and 2013, the Company had a net loss of approximately $7,406,000 and $6,330,000, respectively. As of April 30, 2014, the Company has an accumulated deficit of approximately $38,880,000.

As of January 31, 2015, we had negative working capital of $4.7 million and cash and cash equivalents of $0.2 million. While we have raised approximately $14 million (net proceeds of approximately $13 million, which included the conversion of $2 million in convertible notes issued in December 2014) through our private placement closed on March 13, 2015, and as of March 31, 2015, we had working capital of $7.3 million and cash and cash equivalents of $9.8 million, we expect to continue to experience losses for the foreseeable future.

The amount of these losses may vary significantly from year-to-year and quarter-to-quarter and will depend on, among other factors:

- the cost of continuing to build out our TumorGraft Technology Platform;
- the cost and rate of progress toward growing our POS and TOS businesses;
- the cost and rate of progress of our sales team;
- the cost of increasing our research and development;
- the cost of renting our laboratory and animal testing facilities and payment for associated services;
- the timing and cost of obtaining and maintaining any necessary regulatory approvals;
- the cost of expanding and building out our infrastructure; and
- the cost incurred in hiring and maintaining qualified personnel.

Currently, the Company derives revenue from POS services and TOS products, while pursuing efforts to further develop bioinformatics from its TumorBank and its TumorGraft Technology Platform. In addition, we are building our sales and marketing operations to grow our TOS and POS services. Accordingly, we expect to generate operating losses in the future until such time as we are able to generate significantly more revenue.

To become profitable, we will need to generate revenues to offset our operating costs, including our research and development and general and administrative expenses. We may not achieve or, if achieved, sustain our revenue or profit objectives. Our losses may increase in the future, and, ultimately, we may have to cease operations.

In order to grow revenues, we must invest capital to implement our sales and marketing efforts and to successfully develop our bioinformatics from our TumorBank and our TumorGraft Technology Platform. Because we do not have sufficient history of commercial efforts, our sales and marketing efforts may never generate significant increases in revenues or achieve profitability and it is likely that we will be required to raise additional capital to continue our operations as currently contemplated. If we must devote a substantial amount of time to raising capital, it will delay our ability to achieve our business goals within the time frames that we now expect, which could increase the amount of capital we need. In addition, the amount of time expended by our management on fundraising distracts them from concentrating on our business affairs. If we require additional capital and are not successful in raising the needed capital, we may have to cease operations.

We may not be able to maintain or increase our revenues due to our reduction in POS service prices, the length of time it takes to conduct TumorGrafts, the uncertainty of whether TumorGrafts will successfully implant and the limited information about the correlation between the response to drugs of a tumor in mice with the response to those drugs of the tumor in patients.

We may not be able to successfully maintain or increase our POS services on a profitable basis. In the 2012 fiscal year, we significantly reduced the pricing on our POS services as part of the strategic decision to increase the number of patients to whom we sell these products and increase the number of models in our TumorBank. As a result, our gross margin for this service has decreased, and was negative 12% for 2013 and negative 21% for 2014.

In addition, it can take more than six months from the time that a tumor is implanted until it has been expanded to a larger colony of mice and treated with the drugs, although we generally cease efforts after six months. As a result, potential POS customers who need information quickly for their treatment may not elect to use our TumorGraft products. Moreover, not all TumorGrafts result in successful tumor growths; if TumorGrafts are not successful, studies of drugs cannot be conducted, which makes the TumorGrafts of limited value to potential POS customers. Finally, our information about the correlation between the response to drugs of a tumor in mice to the response to those drugs of the tumor in a patient is based on a very limited amount of information, and so may not be accurate with respect to oncology patients in general. If we are unable to demonstrate a correlation between the TumorGraft drug study results and patients' actual treatment results, customers may not be interested in our POS services, which could result in low growth or a decrease in revenues. In addition, the limited data regarding the clinical outcomes associated with the use of our POS services substantially restricts the promotional claims we may make about those products, limiting the effectiveness of our marketing efforts.

We may incur greater costs than anticipated, which could result in sustained losses.

We use reasonable efforts to assess and predict the expenses necessary to pursue our business strategies. However, implementing our business strategies may require more employees, capital equipment, supplies or other expenditure items than management has predicted. Similarly, the cost of compensating additional management, employees and consultants or other operating costs may be more than we estimate, which could result in ongoing and sustained losses.

We may not be able to implement our business strategies which could impair our ability to continue operations.

Implementation of our business strategies will depend in large part on our ability to (i) attract and maintain a significant number of customers; (ii) effectively provide acceptable services to our customers; (iii) develop and license new products and technologies; (iv) maintain appropriate internal procedures, policies, and systems; (v) hire, train,

and retain skilled employees and management; (vi) continue to operate despite increasing competition in our industry; and (vii) establish, develop and maintain our name recognition. Our inability to obtain or maintain any or all these factors could impair our ability to implement our business strategies successfully, which could have material adverse effects on our results of operations and financial condition.

Our business could be adversely impacted by changes in FDA's regulatory oversight of laboratory-developed tests such as our POS services that are currently under consideration or by other changes in the regulatory requirements applicable to our POS services imposed by the FDA or regulatory authorities in other countries in which our services are provided.

The FDA has claimed regulatory authority over all laboratory-developed tests, or LDTs, such as our POS services, but has generally not exercised its regulatory authority for most LDTs performed by CLIA-certified laboratories such as our facilities. The FDA has announced several regulatory and guidance initiatives that may impact our business, including by increasing FDA's regulation of LDTs.

On July 31, 2014 the FDA notified Congress of the FDA's intent to issue a draft oversight framework for LDTs based on risk to patients rather than whether they were made by a conventional manufacturer or a single laboratory. This draft oversight framework includes pre-market review for higher-risk LDTs, like those used to guide treatment decisions, including the many companion diagnostics that have entered the market as LDTs. In addition, under the draft framework, the FDA would continue to exercise enforcement discretion for low-risk LDTs and LDTs for rare diseases, among others. The framework would be phased in over many years. If this framework is implemented, these initiatives may lead to an increased regulatory burden on our Company, which may result in a requirement for FDA review and clearance or approval of our POS services. Any increased regulatory burdens would probably result in an increase in the cost of our POS services and could keep us from selling POS services until such time as any required FDA clearance or approval is obtained. If our POS services become subject to FDA's approval and oversight as medical devices, the additional regulatory burdens may be significant, and may require the addition of experienced medical device quality, regulatory and compliance personnel to assume these burdens. Any POS services that we provide in other countries may be similarly subject to regulation by foreign regulatory agencies, which would also increase our costs. These matters could hurt our business and our financial results.

Our laboratory is subject to regulation and licensure requirements, and the healthcare industry is highly regulated; we may face substantial penalties, and our business activities may be impacted, if we fail to comply.

Our TumorGraft products are performed in laboratories that are subject to state regulation and licensure requirements. Such regulation and requirements are subject to change, and may result in additional costs or delays in providing our products to our customers. In addition, the healthcare industry in general is highly regulated in the United States at both the federal and state levels. We seek to conduct our business in compliance with all applicable laws, but many of the laws and regulations potentially applicable to us are vague or unclear. These laws and regulations may be interpreted or applied by an authority in a way that could require us to make changes in our business. We may not be able to obtain all regulatory approvals needed to operate our business or sell our services. If we fail to do so, we could be subject to civil and criminal penalties or fines or lose the authorizations necessary to operate our business, as well as incur additional liabilities from third parties. If any of these events happened, they could hurt our business and financial results.

If our laboratory facilities are damaged or destroyed, we have a dispute with our landlord, or our mice population has a health crisis, our business would be negatively affected.

We currently utilize laboratories in Maryland and New York to perform our tumor studies and develop and bank our TumorGraft Technology Platform models. The majority of our studies are conducted in our main laboratory in Baltimore, Maryland. If this facility were to be significantly damaged or destroyed, we could suffer a loss of our ongoing and future drug studies, as well as our TumorGraft bank. In addition, we lease the space for this laboratory from a third party. If we had a dispute with our landlord or otherwise could not utilize this space, it would take time to find and move to a new facility, which could negatively affect our results of operations. Finally, our TumorGraft operations depend on having a colony of live mice available. If this population experienced a health crisis, such as a virus, that would affect the success of both current POS and TOS business and future business as we would have to rebuild the population and repeat current TumorGrafts.

We have limited experience marketing and selling our products and may need to rely on third parties to successfully market and sell our products and generate revenues.

We need to continue building a marketing and sales function or enter into agreements with consultants to market our products. Our ability to gain market acceptance and generate revenues will be substantially dependent upon our ability to successfully market our products and/or enter into such agreements on favorable terms and to manage the efforts of those employees or service providers, as the case may be. If we are not successful in building market share, profitability, and our future prospects will not be realized.

We will continue to be dependent upon key employees.

Our success, currently, is dependent upon the efforts of several full-time key employees, the loss of the services of one or more of which would have a material adverse effect on our business and financial condition. We intend to continue to develop our management team and attract and retain qualified personnel in all functional areas to expand and grow our business. This may be difficult in the healthcare industry where competition for skilled personnel is intense, even as the United States has seen an overall downturn in its economy.

Because our industry is very competitive and many of our competitors have substantially greater capital resources and more experience in research and development, we may not succeed in selling or increasing sales of our products and technologies.

We are engaged in a rapidly changing and highly competitive field. Potential competitors in the United States and abroad are numerous and include diagnostic companies and provides of clinical research services, most of which have substantially greater capital resources and more experience in research and development capabilities. Furthermore, new companies will likely enter our market from the United States and abroad, as scientific developments surrounding other cancer diagnostic services continue to accelerate in the multibillion dollar oncology marketplace. Our competitors may succeed in selling their products to our potential patient and physician customers more effectively than we sell our products. In addition, academic institutions, hospitals, governmental agencies, and other public and private research organizations also may conduct similar research, seek patent protection, and may develop and commercially introduce competing products or technologies on their own or through joint ventures. If one or more of our competitors succeeds in developing similar technologies and products that are more effective or successful than any of those that we currently sell or will develop, our results of operations will be significantly adversely affected.

If we are unable to protect our intellectual property, we may not be able to compete as effectively.

- It is important in the healthcare industry to obtain patent and trade secret protection for new technologies, products, and processes. Our success will depend, in part, upon our ability to obtain, enjoy, and enforce protection for any products we have, develop or acquire under United States and foreign patent laws and other intellectual property laws, preserve the confidentiality of our trade secrets, and operate without infringing the proprietary rights of third parties. Where appropriate, we will seek patent protection for certain aspects of our technology. However, while our TumorGraft Technology Platform is proprietary and requires significant know-how to both initiate and operate, it is not patented. It is, therefore, possible for competitors to develop other implantation procedures, or to discover the same procedures utilized by us, that could compete with us in our market.

- It also is unclear whether efforts to secure our trade secrets will provide useful protection. While we will use reasonable efforts to protect our trade secrets, our employees or consultants may unintentionally or willfully disclose our proprietary information to competitors resulting in a loss of protection. Enforcing a claim that someone else illegally obtained and is using our trade secrets, like patent litigation, is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Finally, our competitors may independently develop equivalent knowledge, methods and know-how.

Claims by others that our products infringe their patents or other intellectual property rights could adversely affect our financial condition.

The healthcare industry has been characterized by frequent litigation regarding patent and other intellectual property rights. Patent applications are maintained in secrecy in the United States and also are maintained in secrecy outside the United States until the application is published. Accordingly, we can conduct only limited searches to determine whether our technology infringes the patents or patent applications of others. Any claims of patent infringement asserted by third parties would be time-consuming and could likely:

- result in costly litigation;
- divert the time and attention of our technical personnel and management;
- require us to develop non-infringing technology; or
- require us to enter into royalty or licensing agreements.

We may invest or spend our cash in ways with which you may not agree or in ways which may not yield a significant return.

Our management has considerable discretion in the use of our cash. Our cash may be used for purposes that do not increase our operating results or market value. Until the cash is used, it may be placed in investments that do not produce significant income or that may lose value. The failure of our management to invest or spend our cash effectively could result in unfavorable returns and uncertainty about our prospects, each of which could cause the price of our common stock to decline.

Risks Related to Our Common Stock

Investment in our common stock may be diluted if we issue additional shares in the future.

We may issue additional shares of common stock, which will reduce shareholders' percentage ownership and may dilute per share value. Our Certificate of Incorporation authorizes the issuance of 200,000,000 shares of common stock. As of April 30, 2015, we had 107,661,339 shares of common stock issued and 104,425,103 shares outstanding. The future issuance of all or part of the remaining authorized common stock would result in substantial dilution in the percentage of the common stock held by existing shareholders. The issuance of common stock for future services, acquisitions, or other corporate actions may have the effect of diluting the value of the shares held by existing shareholders, and might have an adverse effect on any market for our common stock.

Although we are not currently pursuing additional financing, to the extent that we raise additional funds by issuing equity securities or convertible debt securities, our stockholders may experience significant dilution. Sale of additional equity and/or convertible debt securities at prices below certain levels will trigger anti-dilution provisions with respect to certain securities we have previously sold. If additional funds are raised through a credit facility or the issuance of debt securities or preferred stock, lenders under the credit facility or holders of these debt securities or preferred stock would likely have rights that are senior to the rights of holders of our common stock, and any credit facility or additional securities could contain covenants that would restrict our operation.

Potential future sales or issuances of our common stock to raise capital, or the perception that such sales could occur, could cause dilution to our current stockholders and the price of our common stock to fall.

We have historically supported our operations through the issuance of equity and expect to continue to do so in the future. Although we may not be successful in obtaining financing through equity sales on terms that are favorable to us, if at all, any such sales that do occur could result in substantial dilution to the interests of existing holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock or other equity securities to any new investors, or the anticipation of such sales, could cause the trading price of our common stock to fall.

The exercise of outstanding options and warrants may dilute current shareholders.

As of April 30, 2015, there were 49,366,101 warrants and options outstanding to purchase shares of our common stock, of which 42,429,162 shares are vested. The exercise of a substantial number of these outstanding warrants and options could adversely affect our share price and dilute current shareholders.

There is a limited trading market for our common stock, which may make it difficult for you to sell your shares and you may be subject to state securities laws for any resale.

Our common stock is quoted on the over-the-counter or OTC Bulletin Board. Like many stocks quoted on the OTC Bulletin Board, trading in our common stock is thin and characterized by wide fluctuations in trading prices, due to many factors that may have little to do with our operations or business prospects. This volatility could depress the market price of our common stock for reasons unrelated to operating performance. Moreover, trading on the OTC Bulletin Board is often more sporadic and volatile than the trading on security exchanges like NASDAQ or New York Stock Exchange. Accordingly, you may have difficulty reselling your shares of our common stock in short time periods. In addition, unlike shares of companies listed on NASDAQ or New York Stock Exchange, resales of our shares are not exempt from state, or “blue sky,” securities laws. As a result, you may need to comply with or find an exemption from any registration requirements of state securities laws if you resell our shares.

Our stock price is volatile.

The stock market in general and the market for biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price they paid for it. The market price for our common stock may be influenced by many factors, including:

- regulatory developments in the United States and foreign countries;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the healthcare payment system overseas to the degree we receive revenue from such healthcare systems overseas;
- announcements by us of significant acquisition, strategic partnerships, joint ventures or capital commitments;
- sales of significant shares of stock by large investors;
- intellectual property, product liability, or other litigation against us; and
- the other key facts described in this "Risk Factors" section.

Our common stock may be deemed a "penny stock," which would make it more difficult for you to sell your shares.

Our common stock is subject to the "penny stock" rules adopted under Section 15(g) of the Securities Exchange Act of 1934, as amended. These rules require, among other things, that brokers who trade penny stocks complete certain documentation, make suitability inquiries of investors and provide investors with certain information concerning trading in the security, including a risk disclosure document and quote information under certain circumstances. Many brokers have decided not to trade penny stocks because of the requirements of the penny stock rules and, as a result, the number of broker-dealers willing to act as market makers in such securities is limited. If we remain subject to the penny stock rules for any significant period, it could have an adverse effect on the market, if any, for our common stock. Because our common stock is subject to the penny stock rules, you may find it more difficult to dispose of the shares of our common stock that you have purchased.

Certain provisions of Delaware law, of our charter and bylaws and of our contractual agreements contain provisions that could delay and discourage takeover attempts and any attempts to replace our current management by shareholders.

Certain provisions of our certificate of incorporation and bylaws, applicable provisions of Delaware corporate law, and our contractual agreements could make it difficult for or prevent a third party from acquiring control of us or changing our Board of Directors and management. These provisions include:

- requirements that our stockholders comply with advance notice procedures in order to nominate candidates for election to our Board of Directors or to place stockholders' proposals on the agenda for consideration at meetings of stockholders; and
- in connection with private placements of our stock in 2011, 2013 and 2015, we covenanted that we would not merge or consolidate with another company unless either the transaction and the trading volume of our stock met certain thresholds and qualifications or we obtained the consent of certain of the investors who purchased our stock in those private placements.

Insiders own a significant amount of the outstanding common stock.

Insiders own a significant amount of our outstanding common stock which could discourage takeover attempts. Our directors, affiliates and executive officers collectively beneficially own approximately 68% of our outstanding stock as of April 30, 2015.

USE OF PROCEEDS

We will not receive any proceeds from the sale of shares of our common stock by the selling security holders. A portion of the shares covered by this prospectus are issuable upon exercise of warrants to purchase our common stock. Upon any exercise of the warrants for cash, the selling security holders would pay us the exercise price of the warrants. Under certain conditions set forth in the warrants, the warrants are exercisable on a cashless basis. If the warrants are exercised on a cashless basis, we would not receive any cash payment from the selling security holders upon any exercise of the warrants. Instead, the selling security holders would satisfy their obligation to pay the exercise price through a formula-based transfer of warrant shares to us. The additional proceeds we could receive from the exercise of such warrants have not yet been earmarked for any specific use beyond working capital needs because there is no certainty that we will ever receive any proceeds from the exercise of such warrants.

The selling security holders will pay any underwriting discounts and commissions and expenses incurred by the selling security holders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling security holders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees and fees and expenses of our counsel and our accountants.

PRICE RANGE OF COMMON STOCK

The following information sets forth the high and low quotation price for our common stock for each quarter within the last two fiscal years. Our common stock, CSBR, is traded over-the-counter and quoted on the electronic Bulletin Board maintained by the National Association of Securities Dealers. The quotations represent prices between dealers and do not reflect the retailer markups, markdowns or commissions, and may not represent actual transactions. Our securities are presently classified as "penny stocks" as defined by existing securities laws. This classification places significant restrictions upon broker-dealers desiring to make a market in such securities. The price range per share reflected in the table below is the high and low sales prices of our common stock for the periods presented.

	High	Low
Month Ended		
May 31, 2015 (through May 15, 2015)	$0.70	$0.62
Fiscal Year 2015		
Fourth Quarter	$0.75	$0.23
Third Quarter	$1.65	$0.80
Second Quarter	$1.99	$1.08
First Quarter		