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

Form 10-K

(Mark One)

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

For the fiscal year ended April 30, 2022

or

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

For the transition period from to

Commission file number 001-11504

CHAMPIONS ONCOLOGY, INC.

(Exact name of registrant as defined in its charter)

Delaware	**52-1401755**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
One University Plaza, Suite 307 Hackensack, New Jersey	**07601**
(Address of principal executive offices)	*(Zip Code)*

Registrant's telephone number, including area code:
(201) 808-8400

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, par value $0.001 per share	CSBR	Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act:
None.

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

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

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

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by checkmark whether the registrant has filed a report on the attestation to its management's effectiveness of its internal control over financial reporting under section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262 (b) by the registered public accounting firm that prepared or issued its audit report. ☐

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

The approximate aggregate market value of the voting stock held by non-affiliates of the Registrant as of October 31, 2021 was $44.0 million based on the closing price of the Registrant's common stock as quoted on the Nasdaq Capital Market as of that date.

The number of shares of common stock of the Registrant outstanding as of July 20, 2022 was 13,522,441.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement for its 2021 Annual Meeting of Shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, are incorporated by reference into Part III of this Form 10-K.

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FOR THE YEAR ENDED APRIL 30, 2021

As used in this Annual Report on Form 10-K (the "Annual Report"), “Champions Oncology, Inc.,” “Champions,” the “Company,” “we,” “ours,” and “us” refer to Champions Oncology, Inc. and its subsidiaries, except where the context otherwise requires or as otherwise indicated.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, (the "Exchange Act") that inherently involve risk and uncertainties. Forward-looking statements may be identified by the words “project,” “believe,” “anticipate,” “plan,” “expect,” “estimate,” “intend,” “should,” “would,” “could,” “will,” “may,” “likely” or similar expressions. Forward-looking statements in this Annual Report include statements about our business strategies and products development activities, including the anticipated benefits and risks associated with those strategies as well as statements about the sufficiency of our capital resources. One should not place undue reliance on these forward-looking statements. We cannot guarantee that we will achieve the plans, intentions or expectations expressed or implied in our forward-looking statement. There are a number of important factors that could cause actual results, levels of activity, performance or events to differ materially from those expressed or implied in the forward-looking statements we make. These important factors are described under “Risk Factors” set forth below. In addition, any forward-looking statements we make in this Annual Report speak only as of the date of this document, and we do not intend to update any such forward-looking statements to reflect events or circumstances that occur after that date, except as required by law. As a result of these and other factors, our stock price may fluctuate dramatically.

PART I

Item 1. *Business*

Overview

We are a technology-enabled research organization engaged in creating transformative technology solutions to be utilized in drug discovery and development. Our research center operates in both regulatory and non-regulatory environments and consists of a comprehensive set of computational and experimental research platforms. Our pharmacology, biomarker, and data platforms are designed to facilitate drug discovery and development at lower costs and increased speeds.

At the core of our research platforms is our unique, proprietary bank of Patient Derived Xenograft (PDX) models. This preeminent bank of PDX models is deployed into advanced in vivo and ex vivo pharmacology platforms, providing an enhanced level of insight into therapeutic programs. We currently have approximately 1,500 PDX Models in our TumorBank that we believe reflect the characteristics of patients who enroll in clinical trials (late stage, pretreated and metastatic). This characteristic of our TumorBank is an important differentiator to other established PDX banks. We implant and expand these tumors in mice, which allows for future studies and additional characterization of the tumor. Additional analytical and pharmacology experimental platforms are also available to augment the information gained from studies performed.

The PDX bank is highly characterized at the molecular, phenotypic and pharmacological levels, which provides a differentiated layer of data for our large oncology dataset (the “Datacenter”). The Datacenter combines our proprietary dataset with other large publicly available datasets. This dataset currently includes approximately 3,500 molecular datasets (genomics, transcriptomics, proteomics, phosphor-proteomics), approximately 3,000 clinical drug responses, approximately 3,500 in vivo drug responses, and the accompanying clinical information on the patients from which they were derived (pre and post tumor sample acquisition of drug treatments and responses, age, gender, ethnicity, tumor stage, tumor grade, location of tumor biopsy, histology, etc.) derived from our TumorBank. One unique feature of this proprietary dataset is the fact that it is derived from a living TumorBank. This allows us to continue characterizing the TumorBank over time, and increasing the depth of characterization of the accumulated data. The combination of the breadth and depth of the TumorBank, and associated characterization, drives the value of our Datacenter. The Datacenter also includes approximately 20,000 publicly available datasets including genomics, transcriptomics, proteomics, and functional genomics, and patient outcome. This Datacenter facilitates our computational approach to drug discovery and provides the foundation to our Software as a Service ("SaaS") offerings. Collectively, our computational and experimental research platforms enable a more rapid and precise approach to drug discovery and development.

Through our technology platforms, we have designed an ecosystem of business lines consisting of:

- The sale of research services utilizing our innovative research platforms to biopharmaceutical companies
- The sale of oncology research Software as a Service ("SaaS") tools to cancer research scientists
- The discovery and development of novel oncology therapeutics

Translational Oncology Solutions (TOS) Business

Research Services

Our research services utilize our research center to assist pharmaceutical and biotechnology companies with their drug development process. We perform studies which 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 analysis 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. Additionally, we provide computational or experimental support to identify novel therapeutic targets, select appropriate patient populations for clinical evaluation, identify potential therapeutic combination strategies, and develop biomarker hypothesis of sensitivity or resistance. These studies include the use of our in vivo, ex vivo, analytical and computational platforms.

Increasing the breadth of the TumorBank is an important strategic effort of the Company. We invest significant research and development resources to increase the number of PDX Models in our TumorBank and add unique and different sub-types of cancer that are not historically addressed. This effort also allows us to build highly valuable PDX models derived from patients with resistance to specific therapies or important molecular annotations. We also invest significant resources to increase the depth of characterization of the TumorBank. For each model, this characterization includes phenotypic analysis, molecular analyses, and pharmacologic analysis. This depth of characterization, in an individual tumor basis, is unique and not widely available.

We have performed studies for approximately 500 different pharmaceutical and biotechnology companies over the past ten years, have a high rate of repeat business, and contract with pharmaceutical and biotechnology companies across North America, Europe and Asia. Studies are performed in a preclinical non-regulatory environment, as well as a Good Clinical Regulatory Practice (GCLP) regulatory environment for clinical evaluation. Typical studies are in the $125,000 price range, with an increasing number of studies in the $250,000 to $500,000 range. Studies performed in a regulatory environment can be much larger than those performed within a non-regulatory environment. Revenue from this business has grown at an average annual growth rate of 28% since 2016 and represents the primary source of our current revenue stream.

Software As A Service (SaaS) Business

Our SaaS business, launched in fiscal year 2021, is centered around our proprietary software platform and data tool, Lumin Bioinformatics ("Lumin"), which contains comprehensive information derived from our research services and clinical studies and is sold to customers on an annual subscriptions basis. Our software development teams consist of bioinformatics scientists, mathematicians as well as software engineers. Lumin leverages Champions' large Datacenter coupled with analytics and artificial intelligence to provide a robust tool for computational cancer research. It is the combination of the Datacenter and the analytics that create a unique foundation for Lumin. Insights developed using Lumin can provide the basis for biomarker hypotheses, reveal potential mechanisms of therapeutic resistance, and guide the direction of additional preclinical evaluations.

Drug Discovery and Development Business

We began investing in drug discovery in fiscal year 2021. Our nascent drug discovery and development business leverages the computational and experimental capabilities within our platforms. Our discovery strategy utilizes our Datacenter, coupled with artificial intelligence and other advanced computational analytics, to identify novel therapeutic targets. We then employ the use of our proprietary experimental platforms to rapidly validate these targets for further drug development efforts. Our efforts center around three areas of focus:

1. Targeted therapy with drug conjugates
2. Immune oncology
3. Cell therapy

Our drug discovery and development business is dependent on a dedicated research and development team, made up of computational and experimental scientists. Importantly, the scientific teams within our Drug Discovery and Development teams are appropriately segregated from our other businesses.

We have a rich pipeline of targets at various stages of discovery and validation, with a select group that has progressed to therapeutic development. Our commercial strategy for the validated targets and therapeutics established from this business is wide-ranging and still being developed. It will depend on many factors, and will be specific for each target or therapeutic area identified.

We regularly evaluate strategic options to create additional value from our drug discovery business, which may include, but are not limited to, potential spin-out transactions or capital raises.

Our sales and marketing efforts are dependent on a dedicated sales force of approximately 31 professionals that sell our services directly to pharmaceutical and biotechnology companies. Our research services team is focused on identifying and selling studies to new customers as well as increasing our revenue from our existing customer base. We spend significant resources in informing our customers and reaching out to new contacts within companies that we currently serve. These efforts are aimed at moving our customers along the adoption curve for our research platforms, thereby increasing the number of studies and the average study size. Our success in these efforts is demonstrated by the growing number of customers who have increased their annual spend on our services over the years.

Our SaaS business development team is focused on identifying and selling subscriptions to new customers, ensuring a high level of use from these subscribers, and increasing our revenue from existing customers through the use of our cloud computing environment. Our sales approach is based on in informing our current research services customers and reaching out to new contacts within companies that we currently serve.

For the year ended April 30, 2022, revenues from our products and services totaled approximately $49.1 million, an increase of approximately 20% from the previous year.

Our Current Strategy

Our strategy is to use our various platform technologies to drive multiple synergistic revenue streams. We continue to build upon this with investments in research and development. Our enterprise strategy consists of the following:

- Establish a global leadership position in oncology research
- A focus on bringing better drugs to patients faster
- Leading innovation in oncology research and development platforms
- Cultivating a solid reputation for the quality of data acquisition and interpretation
- Collaborations across the global biopharma landscape
- Profitable growth across all business lines

Our Growth and Expansion Strategy

Our strategy is to continue to use our various platform technologies to drive multiple synergistic revenue streams.

Our strategy for growth has multiple components:

- *Growing our TumorBank:* We grow our TumorBank in two ways. First, leverage a medical affairs team that works with a well established clinical network to facilitate access to patients diagnosed with prioritized tumors subtypes. Second, we utilize our legacy Personalized Oncology Services business to establish novel PDX models from patients who use this service. The PDX models are then deeply characterized at the phenotypic, molecular, and pharmacologic levels. This data characterization is then added to our DataCenter.
- *Adding new experimental technologies:* The fields of oncology research and drug development are evolving rapidly. To keep up with new approaches, we continuously add new technologies to platform. We are currently investing in developing additional proprietary pharmacology platforms aimed at enhancing the scientific output and driving innovation in the oncology research sector. We are also investing in the development of sophisticated analytical platforms which allow scientists to derive deeper insights when using our pharmacology platforms. Once these

experimental technologies are established they are made available to our research and development and target discovery teams.

- *Continued development of computational power:* We have developed sophisticated and innovative computational approaches. We continue to invest in the development of novel artificial intelligence, data structures, and analytics. Our goal is to leverage our unique Datacenter to establish elegant ways to better understand the molecular dynamics of cancer, and the development novel therapeutics.

Competition

Champions currently competes in three different markets:

Research Services: Pharmaceutical companies rely on outsourcing preclinical studies to Clinical Research Organizations ("CROs"). Competition in this 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.

SaaS: There are two important components of Lumin Bioinformatics: the Datacenter and the Analytics. While we feel our Datacenter is unique, there are a large number of publicly available datasets that can be accessed free of charge for computational research. This publicly available data repertoire is constantly growing as academic labs publish results. We continue to find ways to differentiate our dataset, however there can be no assurance that developments by other companies or academic institutions in data curation will not render our Datacenter obsolete or non-competitive. The second component of Lumin Bioinformatics is the data analytics. While there are a minimal number of software solutions that offer the degree of analytics available within Lumin Bioinformatics, the know-how and workflows of these analytics are well established in bioinformatics labs across academia and the biopharmaceutical industry. As a result, the barrier to entry for developing a SaaS tool leveraging these analytics is relatively low.

Drug Discovery and Development: Our Drug Discovery and Development business places us in a good position of also competing against the same customers of our Research Services and/or SaaS businesses: the global biopharmaceutical industry. The global oncology drug market is estimated to be $85B. Competition in this industry is strong and based significantly on scientific and technological forces, which rely solely on the effectiveness of therapeutics designed to treat cancer. The Company faces significant competition from other biopharmaceutical companies in the United States and abroad. The competitors have a wide range of strategic and operational approaches. Our business strategy is to work with differentiated therapeutic targets and research areas. However, given the intense degree of privacy from our competitors, we cannot guarantee that others within the industry are not also working on these targets. Further, some competitors will operate with no laboratory or experimental operations, while others will have varying degrees of laboratory space and experimental capabilities. There can be no assurance that developments by other companies will not render experimental platforms 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

For the years ended April 30, 2022 and 2021, we spent approximately $9.4 million and $7.2 million, respectively, to further develop our platforms. We continue to expand our TumorBank via the inclusion of tumor tissue and implanted models 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. We are investing in developing additional proprietary pharmacology platforms aimed at enhancing the scientific output and driving innovation in the oncology research sector.

We are also investing in the acquisition of sophisticated analytical platforms which allow scientists to derive deeper insights when using our pharmacology platforms.

Government Regulation

The research, development, and marketing of our products, the performance of our legacy 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 Rockville, Maryland by the State of Maryland 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 legacy POS products, 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.

Human Capital Resources

As of July 15, 2022, we had 230 full-time employees, including 78 with doctoral or other advanced degrees. Of our workforce, 181 employees are engaged in research and development and laboratory operations, 31 employees are engaged in sales and marketing, and 18 employees are engaged in finance and administration.

We believe that our future success will depend, in part, on our ability to continue to attract, hire, and retain qualified personnel. We continue to seek additions to our science and technical staff, although the competition for such personnel in the pharmaceutical and biotechnology industries is intense. Attracting, developing, and retaining skilled and experienced employees in our industry is crucial to our ability to compete effectively. Our ability to recruit and retain such employees depends on a number of factors, including our corporate culture and work environment, our corporate philosophy, internal talent development and career opportunities, and compensation and benefits.

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.

Company History

We were incorporated as a merger and acquisition company under the laws of the State of Delaware on June 4, 1985, under the name “International Group, Inc.” In September 1985, the Company completed a public offering and shortly thereafter acquired the world-wide rights to the Champions sports theme restaurant concept and changed its name to “Champions Sports, Inc.” In 1997, the Company sold its Champions service mark and concept to Marriott International, Inc. and until 2005, was a consultant to Marriott International, Inc. and operated one Champions Sports Bar Restaurant. In January 2007, the Company changed its business direction to focus on biotechnology and subsequently changed its name to Champions Biotechnology, Inc. On May 18, 2007, the Company acquired Biomerk, Inc., at which time we began focusing on our current line of business. In April 2011, the Company changed its 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 Annual Report. 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, 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.

Item 1A. *Risk Factors*

You should carefully consider the risks described below together with all of the other information included in this Annual Report. The risks and uncertainties described below are not the only ones we face. Additional risks not presently known, or those we currently consider insignificant, may also impair our business operations in the future.

We historically incurred losses from operating activities, may require significant capital and may never achieve sustained profitability.

For the years ended April 30, 2022 and 2021, the Company had net income of approximately $548,000 and $362,000, respectively. As of April 30, 2022, the Company has an accumulated deficit of approximately $72.0 million. As of April 30, 2022, we had working capital of $2.2 million and cash of $9.0 million. We believe that our cash on hand, together with expected cash flows from operations, are adequate to fund our operations through at least August 2023.

The amount of our income or losses and liquidity requirements 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 bank;
- the cost and rate of progress toward growing our technology platforms;
- the cost and rate of progress toward building our business units;
- 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 primarily from research services, while pursuing efforts to further develop its SaaS and drug discovery business units. We are investing resources to further grow our sales of all of our business units.

To become sustainably 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 sustain our revenue or profit objectives. If we incur losses in the future and/or we are unable to obtain sufficient capital either from operations or externals sources, 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 technology platforms. Our sales and marketing efforts may never generate significant increases in revenues or achieve profitability and it is possible that we will be required to raise additional capital to continue our operations. 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 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 laboratories are 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 research services 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 products. 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, or we have a dispute with one of our landlords, our business would be negatively affected.

We currently utilize several office suites where our laboratories are located within one facility in Rockville, Maryland. If this facility was to be significantly damaged or destroyed, we could suffer a loss of our ongoing and future drug studies, as well as our TumorBank. In addition, we lease the laboratories from a third party. If we had a dispute with our landlord or otherwise could not utilize our space, it would take time to find and move to a new facility, which could negatively affect our results of operations.

Any health crisis impacting our colony of laboratory mice could have a negative impact on our business.

Our research services operations depend on having a colony of live mice available. If this population experienced a health crisis, such as a virus or other pathogen, such crisis would affect the success of our existing and future business, as we would have to rebuild the population and repeat current studies.

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.

Currently, we rely on the internet, word of mouth, and a small sales force to market our services. We have to compete with other pharmaceutical, biotechnology and life science technology and service companies to recruit, hire, train, and retain marketing and sales personnel. However, there can be no assurance that we will be able to develop in-house sales, and as a result, we may not be able to generate product revenue.

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.

In fiscal 2021, we identified that there was a material weaknesses in our internal control over financial reporting, which if not remediated, could materially adversely affect our ability to timely and accurately report our results of operations and financial condition. We believe this material weakness has since been remediated as of the filing date of this Form 10-K. If we fail to maintain an effective system of internal controls, the accuracy and timing of our financial reporting may be adversely affected.

As described in “Part II, Item 9A - Controls and Procedures,” of this Form 10-K we have concluded that there was a material weakness in our internal control over financial reporting in our prior fiscal reporting year. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. It is necessary for us to maintain effective internal control over financial reporting to prevent fraud and errors and to maintain effective disclosure controls and procedures so that we can provide timely and reliable financial and other information.

Specifically, our risk assessment procedures over certain of our contractual arrangements requiring the payment of royalties for the licensing of technology from third-parties did not adequately identify the risks and consider the Company's obligations based on the recognition of oncology services revenue for the prior fiscal year. As a result, the Company had missing process level controls over the review of royalty arrangements and the timely determination and recognition of related liabilities.

As further described in Part II, Item 9A in this Annual Report on Form 10-K, while we believe that we have implemented and carried out a remediation plan to remediate this material weakness, there can be no assurance that this will not occur in future reports. We may identify additional material weaknesses in our internal control over financial reporting in the future. If

we are unable to fully remediate this material weakness or we identify additional material weaknesses in our internal control over financial reporting in the future, we may not be able to analyze, record and report financial information accurately, and/or to prepare our financial statements within the time periods specified by the rules.

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 providers 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 pre-clinical and clinical services grow in the multibillion dollar oncology marketplace. Our competitors may succeed in selling their products to our pharmaceutical and biotech 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.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

We rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also seek to enter into confidentiality and invention assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Our trade secrets may also be obtained by third parties by other means, such as breaches of our physical or computer security systems. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

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.

Research service studies are subject to cancellation based on changes in customer's development plans.

Our revenue is primarily derived from studies performed for pharmaceutical and biotechnology companies to assist in the development of oncology drugs. There are many factors that could result in the change of our customers development plans for specific drugs, including without limitation to their research and development budgets and drug development strategies. These changes could lead to the cancellation or modification of on-going or planned studies. This would have a negative impact on the Company's revenue growth and profit margin.

We face competition in the life science market for computational software and for bioinformatics products.

The market for our computational software platform for the life science market is competitive. We currently face competition from other scientific software providers, larger technology and solutions companies, in-house development by our customers and academic and government institutions, and the open-source community. Some of our competitors and potential competitors have longer operating histories in certain segments of our industry than we do and could have greater financial, technical, marketing, research and development, and other resources. We could also face competition from open-source software initiatives, in which developers provide software and intellectual property free over the Internet. In addition, some of our customers spend significant internal resources in order to develop their own software. There can be no assurance that our current or potential competitors will not develop products, services, or technologies that are comparable to, superior to, or render obsolete, the products, services, and technologies we offer. There can be no assurance that our competitors will not adapt more quickly than we do to technological advances and customer demands, thereby increasing such competitors' market share relative to ours. Any material decrease in demand for our technologies or services may have a material adverse effect on our business, financial condition, and results of operations.

Drug development programs, particularly those in early stages of development, may never be commercialized.

Our future success depends, in part, on our ability to select successful product candidates, complete preclinical development of these product candidates and advance them to and through clinical trials. Early-stage product candidates in particular require significant investment in development, preclinical studies and clinical trials, regulatory clearances and substantial additional investment before they can be commercialized, if at all.

Our research and development programs may not lead to commercially viable products for several reasons, and are subject to the risks and uncertainties associated with drug development. For example, we may fail to identify promising product candidates, our product candidates may fail to be safe and effective in preclinical tests or clinical trials, or we may have inadequate financial or other resources to pursue discovery and development efforts for new product candidates. From time to time, we may establish and announce certain development goals for our product candidates and programs. However, given the complex nature of the drug discovery and development process, it is difficult to predict accurately if and when we will achieve these goals. If we are unsuccessful in advancing our research and development programs into clinical testing or in obtaining regulatory approval, our long-term business prospects will be harmed.

Drug discovery programs, particularly those in early stages of development, may never be commercialized.

Our future success in drug discovery depends, in part, on our ability to select successful product candidates, complete preclinical development of these product candidates and advance them to and through clinical trials. Early-stage product candidates in particular require significant investment in development, preclinical studies and clinical trials, regulatory clearances and substantial additional investment before they can be commercialized, if at all.

Our research and development programs related to drug discovery may not lead to commercially viable products for several reasons, and are subject to the risks and uncertainties associated with drug development. For example, we may fail to identify promising product candidates, our product candidates may fail to be safe and effective in preclinical tests or clinical trials, or we may have inadequate financial or other resources to pursue discovery and development efforts for new product candidates. From time to time, we may establish and announce certain development goals for our product candidates and programs. However, given the complex nature of the drug discovery and development process, it is difficult to predict accurately if and

when we will achieve these goals. If we are unsuccessful in advancing our research and development programs into clinical testing or in obtaining regulatory approval, our long-term business prospects will be harmed.

Impairment of goodwill or other long term assets may adversely impact future results of operations

We have intangible assets, including goodwill, and capitalized software development costs on our balance sheet. If the future growth and operating results of our business are not as strong as anticipated and/or our market capitalization declines, this could impact the assumptions used in calculating the fair value of goodwill or recoverability of our capitalized software development costs. To the extent impairment occurs, the carrying value of our assets will be written down to an implied fair value and an impairment charge will be made to our income from continuing operations. Such an impairment charge could materially and adversely affect our operating results.

Our ability to use our net operating loss carry-forwards and certain other tax attributes may be limited.

Under Section 382 of the Internal Revenue Code of 1986, as amended, referred to as the Internal Revenue Code, if a corporation undergoes an "ownership change" (generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period), the corporation's ability to use its pre-change net operating loss carry-forwards and other pre-change tax attributes (such as research tax credits) to offset its post-change income may be limited. We believe that our 2016 public offering, taken together with our private placements and other transactions that have occurred since then, may have triggered an "ownership change" limitation. We may also experience ownership changes in the future as a result of subsequent shifts in our stock ownership. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carry-forwards to offset U.S. federal taxable income may be subject to limitations, which potentially could result in increased future tax liability to us.

We have a limited market for our common stock, which makes our securities very speculative.

Trading activity in our common stock is and has been limited. As a result, an investor may find it difficult to dispose of, or to obtain accurate quotations of the price of our common stock. There can be no assurance that a more active market for our common stock will develop, or if one should develop, there is no assurance that it will be sustained. This could severely limit the liquidity of our common stock, and would likely have a material adverse effect on the market price of our common stock and on our ability to raise additional capital. Furthermore, like many stocks quoted on the Nasdaq Capital Market, 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.

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 July 20, 2022, we had 13,522,441 shares of common stock issued and 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.

To the extent that we raise additional funds by issuing equity securities or convertible debt securities in the future, 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 may 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.

Our stock price is volatile and therefore investors may not be able to sell their common stock at or above the price they paid for it.

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.

Certain provisions 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 stockholders.

Certain provisions of our certificate of incorporation and bylaws, 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.

Certain provisions of Delaware law make it more difficult for a third party to acquire us and make a takeover more difficult to complete, even if such a transaction were in the stockholders' interest.

The Delaware General Corporation Law contains provisions that may have the effect of making it more difficult or delaying attempts by others to obtain control of us, even when these attempts may be in the best interests of our stockholders. We also are subject to the anti-takeover provisions of the Delaware General Corporation Law, which prohibit us from engaging in a "business combination" with an "interested stockholder" unless the business combination is approved in a prescribed manner and prohibit the voting of shares held by persons acquiring certain numbers of shares without obtaining requisite approval. The statutes have the effect of making it more difficult to effect a change in control of a Delaware company.

Our management and four significant stockholders collectively own a substantial majority of our common stock.

Collectively, our officers, our directors and three significant stockholders own or exercise voting and investment control of approximately 67% of our outstanding common stock as of July 20, 2022. As a result, investors may be prevented from affecting matters involving our company, including:

- the composition of our board of directors and, through it, any determination with respect to our business direction and policies, including the appointment and removal of officers;
- any determinations with respect to mergers or other business combinations;
- our acquisition or disposition of assets; and
- our corporate financing activities.

Furthermore, this concentration of voting power could have the effect of delaying, deterring or preventing a change of control or other business combination that might otherwise be beneficial to our stockholders. This significant concentration of share

ownership may also adversely affect the trading price for our common stock because investors may perceive disadvantages in owning stock in a company that is controlled by a small number of stockholders.

We have not paid any cash dividends in the past and have no plans to issue cash dividends in the future, which could cause the value of our common stock to have a lower value than other similar companies which do pay cash dividends.

We have not paid any cash dividends on our common stock to date and do not anticipate any cash dividends being paid to holders of our common stock in the foreseeable future. While our dividend policy will be based on the operating results and capital needs of the business, it is anticipated that any earnings will be retained to finance our future expansion. As we have no plans to issue cash dividends in the future, our common stock could be less desirable to other investors and as a result, the value of our common stock may decline, or fail to reach the valuations of other similarly situated companies who have historically paid cash dividends in the past.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business or our market, or if they change their recommendations regarding our common stock adversely, the price of our common stock and trading volume could decline.

The trading market for our common stock may be influenced by the research and reports that securities or industry analysts may publish about us, our business, our market or our competitors. If any of the analysts who may cover us change their recommendation regarding our common stock adversely, or provide more favorable relative recommendations about our competitors, the price of our common stock would likely decline. If any analyst who may cover us was to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the price of our common stock or trading volume to decline.

Our business operations could be disrupted if our information technology systems fail to perform adequately.

We rely on information technology networks and systems, including the Internet, to process, transmit, and store information, to manage and support a variety of business processes and activities, and to comply with regulatory, legal, and tax requirements. Our information technology systems, some of which are dependent on services provided by third parties, may be vulnerable to damage, interruption, or shutdown due to any number of causes outside of our control such as catastrophic events, natural disasters, fires, power outages, systems failures, telecommunications failures, employee error or malfeasance, security breaches, computer viruses or other malicious codes, ransomware, unauthorized access attempts, denial of service attacks, phishing, hacking, and other cyberattacks. While we have experienced threats to our data and systems, to date, we are not aware that we have experienced a material breach. Cyberattacks are occurring more frequently, are constantly evolving in nature and are becoming more sophisticated. Additionally, continued geopolitical turmoil, including the Russia-Ukraine military conflict, has heightened the risk of cyberattacks. While we attempt to continuously monitor and mitigate against cyber risks, we may incur significant costs in protecting against or remediating cyberattacks or other cyber incidents.

Sophisticated cybersecurity threats pose a potential risk to the security and viability of our information technology systems, as well as the confidentiality, integrity, and availability of the data stored on those systems, including cloud-based platforms. In addition, new technology that could result in greater operational efficiency may further expose our computer systems to the risk of cyber-attacks. If we do not allocate and effectively manage the resources necessary to build and sustain the proper technology infrastructure and associated automated and manual control processes, we could be subject to billing and collection errors, business disruptions, or damage resulting from security breaches. If any of our significant information technology systems suffer severe damage, disruption, or shutdown, and our business continuity plans do not effectively resolve the issues in a timely manner, our product sales, financial condition, and results of operations may be materially and adversely affected, and we could experience delays in reporting our financial results. In addition, there is a risk of business interruption, violation of data privacy laws and regulations, litigation, and reputational damage from leakage of confidential information. Any interruption of our information technology systems could have operational, reputational, legal, and financial impacts that may have a material adverse effect on our business.

A pandemic, epidemic, or outbreak of an infectious disease in the United States or elsewhere may adversely affect our business and we are unable to predict the potential impact.

We are subject to risks related to public health crises such as the global pandemic associated with COVID-19. The global spread of COVID-19 resulted in the World Health Organization declaring the outbreak a “pandemic,” or a worldwide spread of a new disease, in early 2020. This virus eventually spread world wide to most countries, and to all 50 states within the United States. In response, most countries around the world imposed quarantines and restrictions on travel and mass gatherings in an effort to contain the spread of the virus. Employers worldwide were also required to increase, as much as possible, the capacity

and arrangement for employees to work remotely. More recently, many of the restrictions and travel bans have been eased or lifted completely as global society as a whole works to return to pre-pandemic business and personal practices. Although, to date, these restrictions have not materially impacted our operations, the effect on our business, from the spread of COVID-19 and the actions implemented by the governments of the United States and elsewhere across the globe, may, once again, worsen over time and we are unable to predict the potential impact on our business.

Any outbreak of contagious diseases, or other adverse public health developments, could have a material and adverse effect on our business operations. These could include disruptions or restrictions on our ability to travel, pursue partnerships and other business transactions, receive shipments of biologic materials, as well as be impacted by the temporary closure of the facilities of suppliers. The spread of an infectious disease, including COVID-19, may also result in the inability of our suppliers to deliver supplies to us on a timely basis. In addition, health professionals may reduce staffing and reduce or postpone meetings with clients in response to the spread of an infectious disease. Though we have not yet experienced such events, if they would occur, they could result in a period of business disruption, and in reduced operations, any of which could materially affect our business, financial condition and results of operations. However, as of the date of this Annual Report on Form 10-K, we have not experienced a material adverse effect on our business nor the need for reduction in our work force; and, currently, we do not expect any material impact on our long-term activity. The extent to which COVID-19 impacts our business will depend on future developments which are highly uncertain and cannot be predicted, including, but not limited to, new information which may emerge concerning the increased severity of the COVID-19 virus, the actions to contain COVID-19, or treat its impact.

Deterioration in general economic conditions in the United States and globally, including the effect of prolonged periods of inflation on our customers and suppliers, could harm our business and results of operations.

Our business and results of operations could be adversely affected by changes in national or global economic conditions. These conditions include but are not limited to inflation, rising interest rates, availability of capital markets, energy availability and costs (including fuel surcharges), the negative impacts caused by pandemics and public health crises (including the COVID-19 pandemic), negative impacts resulting from the military conflict between Russia and the Ukraine, and the effects of governmental initiatives to manage economic conditions. Impacts of such conditions could be passed on to our business in the form of a reduced customer base and/or potential for new bookings due to possible reductions in pharmaceutical and biotech industry-wide spend on research and development and/or economic pressure on our suppliers to pass on increased costs.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

The Company currently leases its office and laboratory facilities under non-cancelable operating leases. Rent expense for operating leases is recognized on a straight-line basis over the lease term from the lease commencement date through the scheduled expiration date. Rent expenses totaled $1.9 million and $1.3 million for the years ended April 30, 2022 and 2021, respectively. The Company considers its facilities adequate for its current operational needs.

The Company leases the following facilities:

- One University Plaza, Suite 307, Hackensack, New Jersey 07601, which, since November 2011, serves as the Company's corporate headquarters. The lease was renewed during fiscal 2022 and expires in November 2026. The Company recognized $88,000 and $91,000 of rental costs relative to this lease for fiscal 2022 and 2021, respectively.
- 1330 Piccard Drive, Suite 025, Rockville, MD 20850, which consists of laboratory and office space where the Company conducts operations related to its primary service offerings. The lease expires February 28, 2029. The Company recognized $1.7 million and $1.2 million of rental costs for fiscal 2022 and 2021, respectively.
- 1405 Research Boulevard, Suite 125, Rockville, Maryland 20850, which consisted of laboratory and office space where the Company conducted operations related to its primary service offerings. The Company executed this lease on November 1, 2018 and it was set to expire in April 2024. The Company terminated this lease on June 30, 2020 and transitioned its activities from this location to the Piccard Drive location, as defined above, during the first quarter of fiscal 2021. The Company recognized zero and $43,000 of rental costs for fiscal 2022 and 2021, respectively.
- VIA LEONE XIII, 14, Milan, Italy, which consists of laboratory and office space where the Company conducts operations related to its flow cytometry service offerings. The Company executed the lease for its laboratory space in June 2021, and commenced occupancy during the three months ended October 31, 2021. This lease expires May 2023. The Company

executed the lease for its office space on October 1, 2021. This lease expires in September 2027. The Company recognized rental costs associated with these leases of $81,000 and zero for fiscal years 2022 and 2021, respectively.

Item 3. ***Legal Proceedings***

None.

Item 4. ***Mine Safety Disclosures***

None.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

Principal Market or Markets

Our shares of common stock are currently quoted on the Nasdaq Capital Market under the symbol "CSBR." Our common stock commenced trading on the Nasdaq Capital Market on August 21, 2015. Prior to such date, our shares of common stock were traded over-the-counter and quoted on the OTCQB Marketplace.

The table below sets forth the high and low bid prices of our common stock, as reported on Nasdaq for the periods shown:

	High	Low
Fiscal Year Ended April 30, 2022:		
First quarter	$ 11.25	$ 8.45
Second quarter	11.00	9.23
Third quarter	10.38	7.60
Fourth quarter	8.93	7.06

	High	Low
Fiscal Year Ended April 30, 2021:		
First quarter	$ 10.89	$ 7.46
Second quarter	9.97	7.05
Third quarter	13.45	8.30
Fourth quarter	14.68	10.06

Approximate Number of Holders of Common Stock

As of July 20, 2022 there were approximately 1,900 record holders of the Company's common stock.

Dividends

Holders of our common stock are entitled to receive such dividends as may be declared by our Board of Directors. No dividends have been declared or paid with respect to our common stock and no dividends are anticipated to be paid in the foreseeable future. Any future decisions as to the payment of dividends will be at the discretion of our Board of Directors, subject to applicable law.

Recent Sales by the Company of Unregistered Securities

None.

Repurchases of Securities

None.

Use of Proceeds

None.

Item 6. ***Reserved***

Item 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***

You should read the following discussion and analysis together with our consolidated financial statements and the related notes included elsewhere in this Annual Report. This discussion contains forward-looking statements that are based on our current expectations, estimates, and projections about our business and operations. Our actual results may differ materially from those currently anticipated and expressed in such forward-looking statements as a result of a number of factors, including those we discuss under Item 1A – "Risk Factors" and elsewhere in this Annual Report.

Overview and Recent Developments

We are a technology-enabled research organization engaged in creating transformative technology solutions to be utilized in drug discovery and development. Our research center consists of a comprehensive set of computational and experimental research platforms. Our pharmacology, biomarker, and data platforms are designed to facilitate drug discovery and development at lower costs and increased speeds. We perform studies which 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 analysis 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. Additionally, we provide computational or experimental support to identify novel therapeutic targets, select appropriate patient populations for clinical evaluation, identify potential therapeutic combination strategies, and develop biomarker hypothesis of sensitivity or resistance. These studies include the use of our in vivo, ex vivo, analytical and computational platforms.

We are engaged in the development and sale of advanced technology solutions and products to personalize the development and use of oncology drugs through our Translational Oncology Solutions ("TOS"). This technology ranges from computational-based discovery platforms, unique oncology software solutions, and innovative and proprietary experimental tools such as in vivo, ex vivo and biomarker platforms. Utilizing our TumorGraft Technology Platform ("The Platform"), a comprehensive Bank of unique, well characterized models, we provide select services to pharmaceutical and biotechnology companies seeking personalized approaches to drug development. By performing studies to predict the efficacy of oncology drugs, our Platform facilitates drug discovery with lower costs and increased speed of drug development as well as increased adoption of existing drugs.

As part of our growth strategy, we launched Lumin Bioinformatics ("Lumin"), a new oncology data-driven software program, during fiscal 2021. Our Lumin software contains comprehensive information derived from our research services and clinical studies. Lumin leverages Champions' large Datacenter coupled with analytics and artificial intelligence to provide a robust tool for computational cancer research. It is the combination of the Datacenter and the analytics that create a unique foundation for Lumin. Insights developed using Lumin can provide the basis for biomarker hypotheses, reveal potential mechanisms of therapeutic resistance, and guide the direction of additional preclinical evaluations.

Our drug discovery and development business leverages the computational and experimental capabilities within our platforms. Our discovery strategy utilizes our rich and unique Datacenter, coupled with artificial intelligence and other advanced computational analytics, to identify novel therapeutic targets. We then employ the use of our proprietary experimental platforms to rapidly validate these targets for further drug development efforts.

We have a rich pipeline of targets at various stages of discovery and validation, with a select group that has progressed to therapeutic development. Our commercial strategy for the validated targets and therapeutics established from this business is wide-ranging and still being developed. It will depend on many factors, and will be specific for each target or therapeutic area identified. Any expenses associated with this part of our business are research and development and are expensed as incurred.

We regularly evaluate strategic options to create additional value from our drug discovery business, which may include, but are not limited to, potential spin-out transactions or capital raises.

Results of Operations

The following table summarizes our operating results for the periods presented below (dollars in thousands):

	For the Years Ended April 30,				
	2022	% of Revenue	2021	% of Revenue	% Change
Oncology services revenue	$ 49,109	100.0 %	$ 41,040	100.0 %	19.7 %
Costs and operating expenses:					
Cost of oncology services	23,632	48.1	21,446	52.3	10.2
Research and development	9,374	19.1	7,196	17.5	30.3
Sales and marketing	6,379	13.0	5,520	13.5	15.6
General and administrative	9,117	18.6	6,512	15.9	40.0
Total costs and operating expenses	48,502	98.8	40,674	99.2	19.2
Income from operations	$ 607	1.2 %	$ 366	0.8 %	65.8 %

Oncology Services Revenue

Oncology services revenue, which is primarily derived from research services, was $49.1 million and $41.0 million, for the years ended April 30, 2022 and 2021, respectively, an increase of $8.1 million, or 19.7%. The increase in revenue was primarily due to the expansion of both our platform and product lines creating additional demand for our services, leading to larger pharmacology study sizes in both our in-vivo and ex-vivo platforms.

Cost of Oncology Services

Cost of oncology services were $23.6 million and $21.4 million for the years ended April 30, 2022 and 2021, respectively, an increase of $2.2 million or 10.2%. The increase in cost of oncology services was primarily from an increase in compensation and supply expenses resulting from the larger study sizes, and compensation expense for our SaaS platform. These increases were offset by a decrease in outsourced lab services. Gross margin was 52% for the twelve months ended April 30, 2022 compared to 48% for the twelve months ended April 30, 2021. The improvement in gross margin was the direct result of decreasing the Company's reliance on outsourcing and leveraging revenue growth over the fixed cost component of cost of sales.

Research and Development

Research and development expense was $9.4 million and $7.2 million for the years ended April 30, 2022 and 2021, respectively, an increase of $2.2 million or 30.3%. The increase was primarily due to the investments in new service capabilities and our drug discovery and development programs with the increase coming primarily from compensation and lab supply expenses.

Sales and Marketing

Sales and marketing expense was $6.4 million and $5.5 million for the years ended April 30, 2022 and 2021, respectively, an increase of $0.9 million or 15.6%. The increase was mainly due to compensation expense. Additionally, travel expense increased for our business development team as Covid-19 travel related restrictions eased.

General and Administrative

General and administrative expense was $9.1 million and $6.5 million for the years ended April 30, 2022 and 2021, respectively, a decrease of $2.6 million, or 40.0%. General and administrative expenses were primarily comprised of compensation, insurance, professional fees, IT, and depreciation and amortization expenses. The general and administrative expenses increase was primarily due to increases in non-cash expenses, compensation and IT expenses for data storage and to support the overall infrastructure growth of the company.

Other Income (Expense)

Other expense was $24,000 and other income was $71,000 for the years ended April 30, 2022 and 2021, respectively. Other expense for the year ended April 30, 2022 resulted primarily from foreign currency transaction losses. Other income for the year ended April 30, 2021 was primarily attributable to a $75,000 gain on operating lease termination offset by foreign currency transaction losses.

Liquidity and Capital Resources

Our liquidity needs have typically arisen from the funding of our research and development programs and the launch of new products, working capital requirements, and other strategic initiatives. In the past, we have met these cash requirements through our cash on hand, working capital management, proceeds from certain private placements and public offerings of our securities and sales of products and services. For the years ended April 30, 2022 and 2021, the Company had net income of approximately $548,000 and $362,000, respectively. As of April 30, 2022, the Company had an accumulated deficit of approximately $72.0 million, working capital of $2.2 million and cash of $9.0 million. We believe that our cash on hand, together with expected cash flows from operations, are adequate to fund operations through at least August 2023. Should the Company be required to raise additional capital, there can be no assurance that management would be successful in raising such capital on terms acceptable to us, if at all.

Cash Flows

The following discussion relates to the major components of our cash flows:

Cash Flows from Operating Activities

Net cash provided by (used in) operating activities was $6.5 million and ($1.7) million for the years ended April 30, 2022 and 2021, respectively. The increase in cash provided was primarily due to improving cash based operational results and an increase in deferred revenue. The increase in deferred revenue was primarily driven by cash received upon signing new studies, an indicator of the strength of the Company's sales pipeline. Changes in our working capital accounts were in the ordinary course of business operating activities.

Cash Flows from Investing Activities

Net cash used in investing activities was $2.4 million and $3.2 million for the years ended April 30, 2022 and 2021, respectively. The cash used was for the investment in lab and computer equipment and software development.

Cash Flows from Financing Activities

Net cash provided by financing activities was $0.2 million and $1.2 million for the years ended April 30, 2022 and 2021, respectively. Cash flows provided by financing activities was due to exercises of stock options and decreased from the prior year due to lower volume of exercises of options and warrants.

Critical Accounting Policies

The following discussion of critical accounting policies identifies the accounting policies that require application of management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods. It is not intended to be a comprehensive list of all of our significant accounting policies, which are more fully described in Note 2 of the notes to the consolidated financial statements included in this document. In many cases, the accounting treatment of a particular transaction is specifically dictated by generally accepted accounting principles, with no need for management's judgment in their application. There are also areas in which the selection of an available alternative policy would not produce a materially different result.

General

Our discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States or GAAP. The preparation of the consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, expenses, and related disclosure of contingent assets and liabilities. Significant estimates of the Company include, among other things, accounts receivable realization, revenue recognition (replacement of licensed tumors), valuation allowance for deferred tax assets, recoverability of capitalized software development costs, and stock-based compensation and warrant assumptions. We base our estimates on historical experience, our observance of trends in particular areas and information or valuations and various other assumptions that we believe to be reasonable under the circumstances and which form the basis for making judgments about the carrying value of assets and liabilities that may not be readily apparent from other sources. Actual amounts could differ significantly from amounts previously estimated.

Revenue Recognition

The Company accounts for revenue under the Financial Accounting Standards Board's (FASB) Accounting Standards Codification (ASC) 606, Revenue from Contracts with Customers. In accordance with ASC 606, revenue is now recognized when, or as, a customer obtains control of promised services. The amount of revenue recognized reflects the consideration to which the Company expects to be entitled to receive in exchange for these services.

A performance obligation is a promise (or a combination of promises) in a contract to transfer distinct goods or services to a customer and is the unit of accounting under ASC 606 for the purposes of revenue recognition. A contract's transaction price is allocated to each separate performance obligation based upon the standalone selling price and is recognized as revenue, when, or as, the performance obligation is satisfied. The majority of the Company's contracts have a single performance obligation because the promise to transfer individual services is not separately identifiable from other promises in the contracts, and therefore, is not distinct.

The majority of the Company's revenue arrangements are service contracts that are completed within a year or less. There are a few contracts that range in duration between 1 and 3 years. Substantially all of the Company's performance obligations, and associated revenue, are transferred to the customer over time. Most of the Company's contracts can be terminated by the customer without cause. In the event of termination, the Company's contracts provide that the customer pay the Company for services rendered through the termination date. The Company generally receives compensation based on a predetermined invoicing schedule relating to specific milestones for that contract. In addition, in certain instances a customer contract may include forms of variable consideration such as performance incentives or other provisions that can increase or decrease the transaction price. This variable consideration is generally awarded upon achievement of certain performance metrics. For the purposes of revenue recognition, variable consideration is assessed on a contract-by-contract basis and the amount to be recorded is estimated based on the assessment of the Company's anticipated performance and consideration of all information that is reasonably available. Variable consideration is recognized as revenue if and when it is deemed probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved in the future.

Amendments to contracts are common. The Company evaluates each amendment which meets the criteria of a contract modification under ASC 606. Each modification is further evaluated to determine whether the contract modification should be accounted for as a separate contract or as a continuation of the original agreement.

The Company accounts for amendments as a separate contract when they meet the criteria under ASC 606-10-25-12.

Stock-Based Payments

We typically recognize expense for stock-based payments based on the fair value of awards on the date of grant. We use the Black-Scholes option pricing model to estimate fair value. The option pricing model requires us to estimate certain key assumptions such as expected life, volatility, risk free interest rates, and dividend yield to determine the fair value of stock-based awards. These assumptions are based on historical information and management judgment. We expense stock-based payments over the period that the awards are expected to vest. In the event of forfeitures, compensation expense is adjusted. We report cash flows resulting from tax deductions in excess of the compensation cost recognized from those options (excess tax benefits) as financing cash flows when the cash tax benefit is received.

Recoverability of Capitalized Software Development Costs

The Company accounts for the cost of computer software obtained or developed for internal use as well as the software development and implementation costs associated with a hosting arrangement ("internal-use software") that is a service contract in accordance and with ASC 350, Intangibles - Goodwill and Other ("ASC-350"). We capitalize certain costs in the development of our internal-use software when the preliminary project stage is completed and the software has reached the point of technological feasibility. Capitalization of these costs ceases once the project is substantially complete and the software is ready for its intended purpose and available for sale. Capitalized costs are then amortized using the straight-line method over an estimated useful economic life of three years.

Capitalized software development costs are stated at gross cost less accumulated amortization. Recoverability of these capitalized costs is determined at each balance sheet date by comparing the forecasted future revenues from the related product, based on management's best estimates using appropriate assumptions and projections at the time, to the carrying amount of the capitalized software development costs. If the carrying value is determined not to be recoverable from future revenues, an impairment loss is recognized equal to the amount by which the carrying amount exceeds the future revenues.

Accounting for Income Taxes

We use the asset and liability method to account for income taxes. Significant management judgment is required in determining the provision for income taxes, deferred tax assets and liabilities and any valuation allowance recorded against net deferred tax assets. In preparing the consolidated financial statements, we are required to estimate income taxes in each of the jurisdictions in which we operate. This process involves estimating the actual current tax liability together with assessing temporary differences resulting from differing treatment of items, such as deferred revenue, depreciation on property, plant and equipment, goodwill and losses for tax and accounting purposes. These differences result in deferred tax assets, which include tax loss carry-forwards, and liabilities, which are included within the consolidated balance sheet. We then assess the likelihood that deferred tax assets will be recovered from future taxable income, and to the extent that recovery is not likely or there is insufficient operating history, a valuation allowance is established. To the extent a valuation allowance is established or increased in a period, we include an expense within the tax provision of the consolidated statements of operations. As of April 30, 2022 and 2021, we have established a full valuation allowance for all deferred tax assets.

As of April 30, 2022 and 2021, we recognized a liability for uncertain tax positions on the balance sheet relative to foreign operations in the amount of $181,000. We do not anticipate any significant unrecognized tax benefits will be recorded during the next 12 months. Any interest or penalties related to unrecognized tax benefits is recognized in income tax expense. The Company has not accrued penalties or interest during the year ended April 30, 2022.

Accounting Pronouncements Being Evaluated

In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments - Credit Losses". This update requires immediate recognition of management's estimates of current expected credit losses ("CECL"). Under the prior model, losses were recognized only as they were incurred. The new model is applicable to all financial instruments that are not accounted for at fair value through net income. The standard is effective for fiscal years beginning after December 15, 2022 for public entities qualifying as smaller reporting companies. Early adoption is permitted. We are currently assessing the impact of this update on our consolidated financial statements and have not yet determined the impact on our consolidated financial statements.

Recently Adopted Accounting Pronouncements

In December 2019, the FASB issued ASU 2019-12, Income Taxes (ASC 740) — Simplifying the Accounting for Income Taxes. ASU 2019-12 which modifies ASC 740 to simplify the accounting for income taxes. The ASU removes certain exceptions for recognizing deferred taxes for investments, performing intra-period allocation and calculating income taxes in interim periods. The ASU also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax

goodwill and allocating taxes to members of a consolidated group. ASU 2019-12 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2020. The Company adopted this guidance on May 1, 2021 and it did not have an impact on its consolidated financial statements.

Off-Balance Sheet Financing

We have no off-balance sheet debt or similar obligations. We have no transactions or obligations with related parties that are not disclosed, consolidated into or reflected in our reported results of operations or financial position. We do not guarantee any third-party debt.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

Not applicable.

Item 8. ***Financial Statements and Supplementary Data***

The consolidated financial statements required pursuant to this item are included in Item 15 of this annual report and are presented beginning on page F-1

Item 9. ***Changes in and Disagreements With Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

Management's Report on Disclosure Controls and Procedures

Our management, under the supervision and with the participation of our Principal Executive Officer (our Chief Executive Officer) and Principal Financial Officer (our Chief Financial Officer), has evaluated the effectiveness of our disclosure controls and procedures as of April 30, 2022, the end of our fiscal year covered by this annual report. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or person performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of April 30, 2022, that consider remediation efforts commenced by the Company as a result of the material weakness noted during the assessment of the effectiveness of the Company's internal controls over financial reporting as of and for the year ended April 30, 2021, our Chief Executive Officer and Chief Financial Officer have concluded that, as of April 30, 2022, our disclosure controls and procedures are effective.

Management's Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. This rule defines internal control over financial reporting as a process designed by, or under the supervision of, Company management to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Management has assessed the effectiveness of our internal control over financial reporting using the components established in the Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

A system of internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A material weakness is any deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our company's annual or interim financial statements will not be prevented or detected on a timely basis.

Based upon this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our internal control over financial reporting was effective as of April 30, 2022, the year covered by this Annual Report.

Remediation of Prior Year Material Weakness in Internal Control over Financial Reporting

For the year ended April 30, 2021, we identified a material weakness in the consolidated financial statements close process. Specifically, our risk assessment procedures over certain of our contractual arrangements requiring the payment of royalties for the licensing of technology from third-parties did not adequately identify the risks and consider the Company's obligations based on the recognition of oncology services revenue. As a result, the Company had missing process level controls over the review of royalty arrangements and the timely determination and recognition of related liabilities. Although no material misstatements were identified in our consolidated financial statements, these control deficiencies resulted in immaterial misstatements to our previously issued consolidated financial statements which were corrected in the consolidated financial statements included in the Form 10-K for our fiscal year ended April 30, 2021.

During fiscal year 2022, the Company's management designed and implemented certain measures to address the above-described material weakness and enhance the Company's internal controls which has included enhanced processes and controls such as ensuring adequate identification and review of royalty agreement terms and obligations which have been formalized as of the completion of its third fiscal quarter of fiscal 2022. As part of our remediation measures, the Company has continually monitored its control environment and management has concluded that the remediation plan was implemented, tested, effective, and completed as of April 30, 2022.

Changes in Internal Controls

Other than the remediation of the prior year material weakness, there were no other changes in the Company's internal controls over financial reporting during the year ended April 30, 2022, that materially affected, or were reasonably likely to materially affect the Company's internal control over financial reporting.

Item 9B. ***Other Information***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required by this item will be contained in our 2022 Proxy Statement and such information is incorporated herein by this reference.

Item 11. ***Executive Compensation***

The information required by this item will be contained in our 2022 Proxy Statement and such information is incorporated herein by this reference.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

The information required by this item will be contained in our 2022 Proxy Statement and such information is incorporated herein by this reference.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence***

The information required by this item will be contained in our 2022 Proxy Statement and such information is incorporated herein by this reference.

Item 14. ***Principal Accounting Fees and Services***

The information required by this item will be contained in our 2022 Proxy Statement and such information is incorporated herein by this reference.

PART IV

Item 15. ***Exhibits, Financial Statement Schedules***

(a)1. Financial Statements

(a)2. Financial Statement Schedules

All schedules have been omitted because they are not applicable.

(a)3. Exhibits required to be filed by Item 601 of Regulation S-K.

Exhibit No.	
3.1	Amended and Restated Articles of Incorporation (incorporated by reference to Appendix A to the Company's Information Statement on Schedule 14C filed March 7, 2011)
3.1.1	Certificate of Amendment to Amended and Restated Articles of Incorporation (incorporated by reference to Exhibit 3(i) to the Company's Current Report on Form 8-K filed April 28, 2015)
3.2	Amended and Restated Bylaws, as amended (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed May 9, 2017)
4.1	Description of Registered Securities (incorporated by reference to Exhibit 4.1 to the Company's Annual Report on Form 10-K filed July 28, 2020)

10.1	Employment Agreement, dated November 5, 2013, between the Company and Ronnie Morris, M.D. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed November 12, 2013)
10.2	Amendment to Employment Agreement, dated March 16, 2015, between the Company and Ronnie Morris (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed March 20, 2015)
10.3	Offer letter dated June 3, 2013 between the Company and David Miller (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 3, 2013)
10.4	2010 Equity Incentive Plan (incorporated by reference to Appendix B to the Company's Definitive Information Statement on Schedule 14C filed March 7, 2011)
10.5	Form of Note Purchase Agreement, dated December 1, 2014, between the Company and each of Joel Ackerman and Ronnie Morris (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 5, 2014)
10.6	Form of Convertible Promissory Note, dated December 1, 2014, issued to each of Joel Ackerman and Ronnie Morris in connection with the Note Purchase Agreement, dated December 1, 2014 between the Company and each of Joel Ackerman and Ronnie Morris incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed December 5, 2014)
10.7	Amendment No. 1 to Convertible Promissory Note, dated December 1, 2014 issued to Joel Ackerman in connection with the Note Purchase Agreement, dated December , 2014, between the Company and each of Joel Ackerman and Ronnie Morris (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 2, 2015)
10.8	Amendment No. 1 to Convertible Promissory Note, dated December 1, 2014 issued to Ronnie Morris in connection with the Note Purchase Agreement, dated December , 2014, between the Company and each of Joel Ackerman and Ronnie Morris (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed March 2, 2015)
10.9	Amended and Restated 2011 Securities Purchase Agreement, dated March 13, 2015, between the Company and each person or entities that are signatories to the Securities Purchase Agreement, dated March 24, 2011, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.10	Form of warrant issued to each person or entities that are signatories to the Securities Purchase Agreement, dated March 24, 2011, between the Company and each investor identified on the signature page thereto (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed January 30, 2013)
10.11	Amendment No. 1 to warrants, dated March 13, 2015, between the Company and each person or entities that are signatories to the Securities Purchase Agreement, dated March 24, 2011, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.12	Amended and Restated 2013 Securities Purchase Agreement, dated March 13, 2015, between the Company and each person or entities that are signatories to the Securities Purchase Agreement, dated January 28, 2013, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.13	Form of warrant issued to each person or entities that are signatories to the Securities Purchase Agreement, dated January 28, 2013, between the Company and each investor identified on the signature page thereto (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed January 30, 2013)
10.14	Amendment No. 1 to warrants, dated March 13, 2015, between the Company and each person or entities that are signatories to the Securities Purchase Agreement, dated January 28, 2013, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.15	Put Right Agreement, dated January 29, 2014, between the Company and each of Joel Ackerman and Ronnie Morris (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed March 6, 2014)
10.16	Securities Purchase Agreement, dated March 11, 2015, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 12, 2015)

10.17	Amended and Restated Registration Rights Agreement, dated March 13, 2015, between the Company and each person or entities that are signatories to (i) the Securities Purchase Agreement, dated March 24, 2011, between the Company and each investor identified on the signature page thereto, (ii) the Securities Purchase Agreement, dated January 28, 2013, between the Company and each investor identified on the signature page thereto, and (iii) the Securities Purchase Agreement, dated March 11, 2015, between the Company. And each investor identified on the signature page thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.18	Form of Investor Warrant issued to each person or entities that are signatories to the Securities Purchase Agreement, dated March 11, 2015, between the Company and each investor identified on the signature page thereto (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.19	Option Exchange Agreement, dated March 16, 2015, between the Company and Joel Ackerman (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 20, 2015)
10.20	Option Exchange Agreement, dated March 16, 2015, between the Company and Ronnie Morris (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed March 20, 2015)
10.21	Option Exchange Agreement, dated March 16, 2015, between the Company and David Miller (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed March 20, 2015)
14	Code of Ethics (incorporated by reference to Exhibit 14 of the April 30, 2008 Form 10-KSB)
21	List of Subsidiaries (incorporated by reference to Exhibit 21 of the Company's Form 10-K filed July 28, 2017)
23.1	Consent of Independent Registered Public Accounting Firm*
31.1	Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer*
31.2	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer*
32.1	Section 1350 Certifications**
101.INS*	XBRL Instance Document.
101.SCH*	XBRL Taxonomy Extension Schema Document.
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.

* Filed herewith

** Furnished hereto.

Item 16. ***Form 10-K Summary***

Not Required.

SIGNATURES

In accordance with Section 13 or 15(d) of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CHAMPIONS ONCOLOGY, INC.

July 22, 2022

/s/ RONNIE MORRIS

Ronnie Morris

Chief Executive Officer

(principal executive officer)

In accordance with the Exchange Act, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ RONNIE MORRIS Ronnie Morris	Chief Executive Officer and Director *(principal executive officer)*	July 22, 2022
/s/ DAVID MILLER David Miller	Chief Financial Officer *(principal financial and accounting officer)*	July 22, 2022
/s/ JOEL ACKERMAN Joel Ackerman	Director, Chairman of the Board of Directors	July 22, 2022
/s/ DAVID SIDRANSKY David Sidransky	Director	July 22, 2022
/s/ ROBERT BRAININ Robert Brainin	Director	July 22, 2022
/s/ SCOTT R. TOBIN Scott R. Tobin	Director	July 22, 2022
/s/ DANIEL MENDELSON Daniel Mendelson	Director	July 22, 2022
/s/ PHILIP BREITFELD Philip Breitfeld	Director	July 22, 2022

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Champions Oncology, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Champions Oncology, Inc. and Subsidiaries (the "Company") as of April 30, 2022 and 2021, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the years then ended, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company as of April 30, 2022 and 2021, and the consolidated results of their operations and their cash flows for each of the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue Recognition

As described further in Note 2 to the consolidated financial statements, revenues are primarily derived from contracts with customers to provide pharmacology services with payments based on fixed fee arrangements. The Company recognizes revenue over time using a progress-based input method that depicts the transfer of control over the life of the performance obligation. Revenue is recognized for the single performance obligation over time due to the Company's right to payment for work performed to date and the performance does not create an asset with an alternative use. Customer payments may be made in advance or on a schedule in the statement of work ("SOW") unrelated to when revenue is recognized resulting in deferred revenue. The determination of the progress as the overall performance obligation is being completed is based on the worked performed in accordance with the SOW and requires management estimates. Pharmacology services revenues for the year ended April 30, 2022 and 2021 were approximately $46.8 million and $39.5 million, respectively.

We identified the accounting for revenue and the related deferred revenue recognized over time as a critical audit matter due to the complexity and subjectivity of management's estimate of the progress towards completion of its projects. This in turn led to a high degree of auditor judgement and subjectivity and significant audit effort was required in performing procedures to evaluate management's determination of the project completion progress, related costs incurred and deferred revenue.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the financial statements. We obtained an understanding and evaluated the design of controls relating to the Company's revenue recognition and deferred revenue. Our audit procedures related to the recognition of revenue over time and deferred revenue included the following procedures, among others, (i) testing the Company's estimates of project progress by evaluating the appropriate SOW and customer acceptance documentation, (ii) testing the significant assumptions used to develop the estimates of project progress pursuant to the SOW and (iii) testing completeness and accuracy of the underlying data.

/s/ EisnerAmper LLP

We have served as the Company's auditor since 2015.

EISNERAMPER LLP
Iselin, New Jersey
July 22, 2022

CHAMPIONS ONCOLOGY, INC.
CONSOLIDATED BALANCE SHEETS
AS OF APRIL 30
(In Thousands except for shares)

	2022	2021
ASSETS		
Current assets:		
Cash	$ 9,007	$ 4,687
Accounts receivable, net	9,513	6,986
Prepaid expenses and other current assets	1,144	957
Total current assets	19,664	12,630
Operating lease right-of-use assets, net	8,230	8,521
Property and equipment, net	7,134	6,090
Other long term assets	15	15
Goodwill	335	335
Total assets	$ 35,378	$ 27,591
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,868	$ 1,894
Accrued liabilities	2,414	2,231
Current portion of operating lease liabilities	1,054	818
Other current liabilities	72	—
Deferred revenue	11,071	6,256
Total current liabilities	17,479	11,199
Non-current portion operating lease liabilities	8,412	8,783
Other non-current liabilities	391	181
Total liabilities	$ 26,282	$ 20,163
Stockholders' equity:		
Common stock, $.001 par value; 200,000,000 shares authorized; 13,522,441 and 13,414,066 shares issued and outstanding at April 30, 2022 and 2021, respectively	14	13
Additional paid-in capital	81,064	79,945
Accumulated deficit	(71,982)	(72,530)
Total stockholders' equity	9,096	7,428
Total liabilities and stockholders' equity	$ 35,378	27,591

The accompanying notes are an integral part of these Consolidated Financial Statements.

CHAMPIONS ONCOLOGY, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(Dollars in Thousands Except Share and Per Share Amounts)

	Year Ended April 30,	
	2022	**2021**
Oncology services revenue	$ 49,109	$ 41,040
Costs and operating expenses:		
Cost of oncology services	23,632	21,446
Research and development	9,374	7,196
Sales and marketing	6,379	5,520
General and administrative	9,117	6,512
Total costs and operating expenses	48,502	40,674
Income from operations	607	366
Other expense:		
Other income (expense), net	(24)	71
Income before income tax expense	583	437
Provision for income tax	35	75
Net income	$ 548	$ 362
Net income per common share outstanding		
basic	$ 0.04	$ 0.03
and diluted	$ 0.04	$ 0.02
Weighted average common shares outstanding		
basic	13,197,170	13,138,995
and diluted	14,159,799	14,573,561

The accompanying notes are an integral part of these Consolidated Financial Statements.

CHAMPIONS ONCOLOGY, INC.
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY
(In Thousands except for shares)

	Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount			
Balance, April 30, 2020	12,726,728	$ 13			$ 77,978	$ (72,892)	$ 5,099
Stock-based compensation expense	—	—	—	—	598	—	598
Issuance of common stock on exercise of stock options	687,338	—	—	—	1,369	—	1,369
Net income	—	—	—	—	—	362	362
Balance, April 30, 2021	13,414,066	$ 13	—	$ —	$ 79,945	$ (72,530)	$ 7,428
Stock-based compensation expense	—	—	—	—	912	—	912
Issuance of common stock on exercise of stock options	108,375	1	—	—	207	—	208
Net income	—	—	—	—	—	548	548
Balance, April 30, 2022	13,522,441	$ 14	—	$ —	$ 81,064	$ (71,982)	$ 9,096

The accompanying notes are an integral part of these Consolidated Financial Statements.

CHAMPIONS ONCOLOGY, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in Thousands)

	Year Ended April 30,	
	2022	**2021**
Operating activities:		
Net income	$ 548	$ 362
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Stock-based compensation expense	912	598
Depreciation and amortization expense	1,627	1,184
Net gain on disposal of equipment	(4)	—
Operating lease right-of-use assets	786	398
Gain on termination of operating lease	—	(75)
Allowance for doubtful accounts	292	49
Changes in operating assets and liabilities:		
Accounts receivable	(2,818)	(2,265)
Prepaid expenses and other current assets	(187)	(572)
Accounts payable	974	(1,246)
Accrued liabilities	183	(316)
Operating lease liabilities	(631)	(242)
Other non-current liability	—	3
Deferred revenue	4,815	441
Net cash provided by (used in) operating activities	6,497	(1,681)
Investing activities:		
Purchase of property and equipment	(2,384)	(3,281)
Refund of security deposit	—	112
Net cash used in investing activities	(2,384)	(3,169)
Financing activities:		
Proceeds from exercise of options and warrants	207	1,369
Finance lease payments	—	(174)
Net cash provided by financing activities	207	1,195
Increase (decrease) in cash	4,320	(3,655)
Cash, beginning of year	4,687	8,342
Cash, end of year	$ 9,007	$ 4,687
Non-cash financing and investing activities:		
Right-of-use assets obtained in exchange for operating lease liabilities	$ 205	$ 6,121

The accompanying notes are an integral part of these Consolidated Financial Statements.

CHAMPIONS ONCOLOGY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Organization and Basis of Presentation

Background

Champions Oncology, Inc. (the "Company"), is engaged in drug discovery and development through data-driven research strategies and innovative pharmacology, biomarker and data platforms. The Company's TumorGraft Technology Platform is an approach to personalizing cancer care based upon the implantation of human tumors in immune-deficient mice. The Company provides a technology platform to pharmaceutical and biotechnology companies using proprietary TumorGraft studies, which the Company believes may be predictive of how drugs may perform in clinical settings. Utilizing the TumorGraft Technology Platform (the "Platform"), a comprehensive Bank of unique, well characterized "Patient Derived XenoGrafts" (PDX) models, the Company offers multiple services to pharmaceutical and biotechnology companies seeking personalized approaches to drug development. By performing studies to predict the efficacy of oncology drugs, our Platform is designed to facilitate drug discovery with lower costs and increased speed of drug development as well as increased adoption of existing drugs.

The Company has three operating subsidiaries: Champions Oncology (Israel), Limited and Champions Biotechnology U.K., Limited, and Champions Oncology S.R.L. For the years ended April 30, 2022 and 2021, there were no revenues earned by these subsidiaries.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The Company operates in one reportable business segment.

Note 2. Summary of Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All material intercompany balances and transactions have been eliminated in consolidation.

Foreign Currency

The Company's foreign subsidiaries functional currency is the U.S. dollar. Transaction gains and losses are recognized in earnings. The Company is subject to foreign exchange rate fluctuations in connection with the Company's international operations. Foreign currency balances are translated at each month end to US dollars, and any resulting gain or loss is recognized in our results of operations, as the amounts are not material.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include, among other things, accounts receivable realization, revenue recognition, valuation allowance for deferred tax assets, recoverability of capitalized software development costs, and stock-based compensation and warrant assumptions. We base our estimates on historical experience, our observance of trends in particular areas and information or valuations and various other assumptions that we believe to be reasonable under the circumstances and which form the basis for making judgments about the carrying value of assets and liabilities that may not be readily apparent from other sources. Actual amounts could differ significantly from amounts previously estimated.

Cash and Cash Equivalents

The Company considers only those investments which are highly liquid, readily convertible to cash, and with original maturities of three months or less to be cash equivalents. As of April 30, 2022 and 2021 the Company had cash balances of $9.0 million and $4.7 million, respectively, and no cash equivalents.

Liquidity

Our liquidity needs have typically arisen from the funding of our research and development programs and the launch of new products, working capital requirements, and other strategic initiatives. In the past, we have met these cash requirements through our cash on hand, working capital management, proceeds from certain private placements and public offerings of our securities, and sales of products and services. For the year ended April 30, 2022, the Company had net income of approximately $548,000, an accumulated deficit of approximately $72.0 million, working capital of $2.2 million and cash of $9.0 million. We believe that our cash on hand, together with expected cash flows from operations, are adequate to fund operations through at least August 2023. Should the Company be required to raise additional capital, there can be no assurance that management would be successful in raising such capital on terms acceptable to us, if at all.

Fair Value

The carrying value of cash, accounts receivable, prepaid expenses, and other current assets, accounts payable, and accrued liabilities approximate their fair value based on the liquidity or the short-term maturities of these instruments. The fair value hierarchy promulgated by GAAP consists of three levels:

- *Level one* — Quoted market prices in active markets for identical assets or liabilities;
- *Level two* — Inputs other than level one inputs that are either directly or indirectly observable; and
- *Level three* — Unobservable inputs developed using estimates and assumptions, which are developed by the reporting entity and reflect those assumptions that a market participant would use.

Determining which category an asset or liability falls within the hierarchy requires significant judgment. The Company evaluates its hierarchy disclosures each quarter. The Company has no assets or liabilities that are measured at fair value on a recurring and/or non-recurring during the years ended April 30, 2022 and 2021.

Property and Equipment

Property and equipment is recorded at cost and primarily consists of laboratory equipment, furniture and fixtures, computer hardware and software, and internally developed software. Assets in progress include equipment or software not yet placed in service. Depreciation and amortization is calculated on a straight-line basis over the estimated useful lives of the various assets ranging from three to seven years. Refer to Footnote 4, "Property and Equipment" for a detailed discussion.

Leases

The Company accounts for its leases under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 842, Leases ("ASC 842"). Under this guidance, arrangements meeting the definition of a lease are classified as operating or financing leases and are recorded on the consolidated balance sheet as both a right-of-use ("ROU") asset and lease liability, calculated by discounting fixed lease payments over the lease term at the rate implicit in the lease or the Company’s incremental borrowing rate. As the Company's leases do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. Lease liabilities are increased by interest and reduced by payments each period, and the right-of-use asset is amortized over the lease term. For operating leases, interest on the lease liability and the amortization of the right-of-use asset result in straight-line rent expense over the lease term.

Impairment of Long-Lived Assets

Impairment losses are to be recognized when the carrying amount of a long-lived asset is not recoverable or exceeds its fair value. The Company evaluates its long-lived assets for impairment whenever events or changes in circumstances indicate that a carrying value may not be recoverable. The Company uses estimates of future cash flows over the remaining useful life of a long- lived asset or asset group to determine the recoverability of the asset. These estimates only include the net cash flows directly associated with, and that are expected to arise as a direct result of, the use and eventual disposition of the asset or asset group. The Company has not recognized any impairment losses for the Company’s long-lived assets for the years ending April 30, 2022 and 2021.

Goodwill

Goodwill represents the excess of the purchase price over the fair value of the net tangible and identifiable intangible assets acquired in a business combination. The Company evaluates the carrying value of goodwill annually in connection with the annual budgeting and forecast process and also between annual evaluations if events occur or circumstances change that would more likely than not reduce the fair value of the reporting unit to which goodwill was allocated to below its carrying amount. Such circumstances could include, but are not limited to: (1) a significant adverse change in legal factors, market conditions, or in business climate, (2) unanticipated competition, or (3) an adverse action or assessment by a regulator. When evaluating goodwill for impairment, we may first perform an assessment qualitatively whether it is more likely than not that a reporting unit's carrying amount exceeds its fair value, referred to as a "step zero" approach. Subsequently (if necessary after step zero), an entity should perform its goodwill impairment test by comparing the fair value of a reporting unit with its carrying value. Under FASB's Accounting Standards Update ("ASU") 2014-02, Topic 350, "Intangibles—Goodwill and Other" goodwill impairment is measured as the excess of the carrying amount of the reporting unit over its fair value.

The impairment evaluation test involves comparing the current fair value of each business unit to its carrying value, including goodwill. Fair value is typically estimated using a discounted cash flow analysis, which requires the Company to estimate the future cash flows anticipated to be generated by the business unit being tested for impairment as well as to select a risk-adjusted discount rate to measure the present value of the anticipated cash flows. When determining future cash flow estimates, the Company considers historical results adjusted to reflect current and anticipated operating conditions. The Company estimates cash flows for the business unit over a discrete period (typically four or five years) and the terminal period (considering expected long term growth rates and trends). Estimating future cash flows requires significant judgment by management in such areas as future economic conditions, industry-specific conditions, product pricing, and necessary capital expenditures. The use of different assumptions or estimates for future cash flows or significant changes in risk-adjusted discount rates due to changes in market conditions could produce substantially different estimates of the fair value of the business unit.

The Company has one reportable segment. The Company assesses goodwill impairment by business unit. Judgments regarding the existence of impairment indicators are based on legal factors, market conditions and operational performance of the businesses. Future events, including but not limited to continued declines in economic activity, loss of contracts or a significant number of customers, or a rapid increase in costs or capital expenditures, could cause us to conclude that impairment indicators exist and that goodwill is impaired. For the year ended April 30, 2022, the Company's annual assessment did not result in any impairment indicators.

Deferred Revenue

Deferred revenue represents payments received in advance of products to be delivered or services to be performed. When products are delivered and/or services are performed, deferred revenue is recognized as earned. Deferred revenue is expected to be recognized within one year.

Other Non-Current Liabilities

Other non-current liabilities represent amounts for uncertain tax positions relating to one of our foreign entities and a financing lease of laboratory equipment in exchange for a lab supplies purchasing commitment.

Cost of Oncology Services

Cost of oncology services relates primarily to our Translational Oncology Solutions ("TOS") business unit. TOS costs consist of direct costs related to laboratory supplies, mice purchases, and maintenance costs for studies completed internally as well as charges from Contract Research Organization's for studies handled externally. Indirect costs include salaries and other payroll related costs of compensation for personnel directly engaged in providing TOS products and services. All costs of performing studies in-house are expensed as incurred. All costs of performing studies from external sources, are expensed when incurred.

Research and Development

Research and development costs represent both costs incurred internally for research and development activities, including personnel costs, mice purchases, and maintenance, as well as costs incurred externally to facilitate research activities, such as tumor tissue procurement and characterization expenses. All research and development costs are expensed as incurred.

Sales and Marketing

Sales and marketing expenses represent costs incurred to promote the Company's products offered, including salaries, benefits and related costs of our sales and marketing personnel, and represent costs of advertising and other selling and marketing expenses. All sales and marketing costs, including advertising costs, are expensed as incurred.

Earnings Per Share

Basic net income or loss per share is computed by dividing the net income or loss for the period by the weighted-average number of shares of common stock outstanding during the period. Diluted net income per share is computed by dividing the net income for the period by the weighted-average number of shares of common stock plus dilutive potential common stock considered outstanding during the period. Such dilutive shares consist of incremental shares that would be issued upon exercise of the Company's common stock purchase warrants and stock options.

Stock-based Payments

The Company typically recognizes expense for stock-based payments based on the fair value of awards on the date of grant. The Company uses the Black-Scholes option pricing model to estimate fair value. The Black-Scholes option valuation model was developed for use in estimating the fair value of short-traded options that have no vesting restrictions and are fully transferable. The option pricing model requires the Company to estimate certain key assumptions such as expected life, volatility, risk free interest rates and dividend yield to determine the fair value of stock-based awards. These assumptions are based on historical information and management judgment. The risk-free interest rate used is based on the United States treasury security rate with a term consistent with the expected term of the award at the time of the grant. Since the Company has limited option exercise history, it has generally elected to estimate the expected life of an award based upon the Securities and Exchange Commission-approved "simplified method" noted under the provisions of Staff Accounting Bulletin No. 107 with the continued use of this method extended under the provisions of Staff Accounting Bulletin No. 110. Estimated volatility is based upon the historical volatility of the Company's common stock. The Company does not anticipate paying a dividend, and therefore, no expected dividend yield was used.

The Company expenses stock-based payments over the period that the awards are expected to vest. In the event of forfeitures, compensation expense is adjusted. The Company expenses modification charges in the period of modification and, if required, over the remaining period the awards are expected to vest. The Company will report cash flows resulting from tax deductions in excess of the compensation cost recognized from those options (excess tax benefits) as financing cash flows, if they should arise.

Income Taxes

Deferred income taxes have been provided to show the effect of temporary differences between the recognition of expenses for financial and income tax reporting purposes and between the tax basis of assets and liabilities, and their reported amounts in the consolidated financial statements. In assessing the realizability of deferred tax assets, the Company assesses the likelihood that deferred tax assets will be recovered through tax planning strategies or from future taxable income, and to the extent that recovery is not likely or there is insufficient operating history, a valuation allowance is established. The Company adjusts the valuation allowance in the period management determines it is more likely than not that net deferred tax assets will or will not be realized. Changes in valuation allowances from period to period are included in the tax provision in the period of change. As of April 30, 2022 and 2021, the Company provided a valuation allowance for all net deferred tax assets, as recovery is not more likely than not based on an insufficient history of earnings.

The Company reflects tax benefits only if it is more likely than not that we will be able to sustain the tax position, based on its technical merits. If a tax benefit meets this criterion, it is measured and recognized based on the largest amount of benefit that is cumulatively greater than 50% likely to be realized. As of April 30, 2022 and 2021 the Company has recorded $181,000 of liabilities related to uncertain tax positions relative to one of its foreign operations.

The Company's practice is to recognize interest and/or penalties related to income tax matters in income tax expense. The Company accrued $0 and $3,000, for interest and penalties on the Company's statement of operations for the years ended April 30, 2022 and 2021, respectively. The Company does not anticipate any significant unrecognized tax benefits to be recorded during the next 12 months. For the year ended April 30, 2022 and 2021, the Company recognized a provision for income taxes of $35,000 and $75,000, respectively. These amounts are mainly attributable to taxable income earned in Israel relating to transfer pricing.

Revenue Recognition

The Company recognizes revenue in accordance with ASC 606, Revenue from Contracts with Customers. The objective of the standard is to establish a single comprehensive revenue recognition model that is designed to create greater comparability of financial statements across industries and jurisdictions. Under this standard, companies recognize revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration to which the Company expects to be entitled in exchange for those goods or services.

All revenue is generated from contracts with customers. The Company recognizes revenue when control of these services is transferred to the customer in an amount, referred to as the transaction price, that reflects the consideration to which the Company is expected to be entitled in exchange for those services. The Company determines revenue recognition utilizing the following five steps: (1) identification of the contract with a customer, (2) identification of the performance obligations in the contract (promised goods or services that are distinct), (3) determination of the transaction price, (4) allocation of the transaction price to the performance obligations, and (5) recognition of revenue when, or as, the Company transfers control of the product or service for each performance obligation. The Company records revenues net of any tax assessments by governmental authorities, such as value added taxes, that are imposed on and concurrent with specific revenue generating transactions.

The majority of the Company's revenue arrangements are service contracts that are completed within a year or less. There are a few contracts that range in duration between 1 and 3 years. Substantially all of the Company's performance obligations, and associated revenue, are transferred to the customer over time. Most of the Company's contracts can be terminated by the customer without cause. In the event of termination, the Company's contracts provide that the customer pay the Company for services rendered through the termination date. The Company generally receives compensation based on a predetermined invoicing schedule relating to specific milestones for that contract.

Amendments to contracts are common. The Company evaluates each amendment which meets the criteria of a contract modification under ASC 606. Each modification is further evaluated to determine whether the contract modification should be accounted for as a separate contract or as a continuation of the original agreement.

The Company accounts for amendments as a separate contract as they meet the criteria under ASC 606-10-25-12.

Pharmacology Study and Other Services

The Company generally enters into contracts with customers to provide oncology services with payments based on fixed-fee arrangements. At contract inception, the Company assesses the services promised in the contracts with customers to identify the performance obligations in the arrangement. The Company's fixed-fee arrangements for oncology services are considered a single performance obligation because the Company provides a highly-integrated service.

The Company recognizes revenue over time using a progress-based input method since there is no single output measure that would fairly depict the transfer of control over the life of the performance obligation. Revenue is recognized for the single performance obligation over time due to the Company's right to payment for work performed to date and the performance does not create an asset with an alternative use. The Company recognizes revenue as portions of the overall performance obligation are completed as this best depicts the progress of the performance obligation.

Incremental Costs of Obtaining a Contract (Sales Commissions)

Under ASC 606, the costs of obtaining a contract can be expensed immediately, rather than capitalized and amortized, if the amortization period is one year or shorter. Sales commissions for the Company represent contract costs with a term of one year or less. Therefore, under ASC 606, the Company elected the practical expedient to expense these costs as incurred.

Variable Consideration

In some cases, contracts provide for variable consideration that is contingent upon the occurrence of uncertain future events, such as the success of the initial performance obligation. Variable consideration is estimated at the expected value or at the most likely amount depending on the type of consideration. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. The estimate of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of its anticipated performance and all information (historical, current and forecasted) that is reasonably available to the Company.

Trade Receivables, Unbilled Services and Deferred Revenue

In general, billings and payments are established by contractual provisions including predetermined payment schedules, which may or may not correspond to the timing of the transfer of control of the Company's services under the contract. In general, the Company's intention in its invoicing (payment terms) is to maintain cash neutrality over the life of the contract. Upfront payments, when they occur, are intended to cover certain expenses the Company incurs at the beginning of the contract. Neither the Company nor its customers view such upfront payments and contracted payment schedules as a means of financing. Unbilled services primarily arise when the revenue recognized exceeds the amount billed to the customer. Such situations occur due to divergences between revenue recognition and the invoicing milestones which are based on predetermined payment terms.

Deferred revenue consists of unearned payments received in excess of revenue recognized. As the contracted services are subsequently performed and the associated revenue recognized, the deferred revenue balance is reduced by the amount of the revenue recognized during the period. Deferred revenue is classified as a current liability on the consolidated balance sheet as the Company expects to recognize the associated revenue in less than one year.

Accounting Pronouncements Being Evaluated

In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments - Credit Losses". This update requires immediate recognition of management's estimates of current expected credit losses ("CECL"). Under the prior model, losses were recognized only as they were incurred. The new model is applicable to all financial instruments that are not accounted for at fair value through net income. The standard is effective for fiscal years beginning after December 15, 2022 for public entities qualifying as smaller reporting companies. Early adoption is permitted. We are currently assessing the impact of this update on our consolidated financial statements and have not yet determined the impact on our consolidated financial statements.

Recently Adopted Accounting Pronouncements

In December 2019, the FASB issued ASU 2019-12, Income Taxes (ASC 740) — Simplifying the Accounting for Income Taxes. ASU 2019-12 which modifies ASC 740 to simplify the accounting for income taxes. The ASU removes certain exceptions for recognizing deferred taxes for investments, performing intraperiod allocation and calculating income taxes in interim periods. The ASU also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. ASU 2019-12 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2020. We adopted this guidance on May 1, 2021. The adoption of this ASU did not have a material impact is reflected in the Company's current year consolidated financial statements.

Note 3. Accounts Receivable, Unbilled Services and Deferred Revenue

Accounts receivable and unbilled services were as follows (in thousands):

	April 30, 2022	April 30, 2021
Accounts receivable	$ 6,037	$ 4,304
Unbilled services	4,106	3,020
Total accounts receivable and unbilled services	10,143	7,324
Less: allowance for doubtful accounts	(630)	(338)
Total accounts receivable, net	$ 9,513	$ 6,986

Deferred revenue was as follows (in thousands):

	April 30, 2022	April 30, 2021
Deferred revenue	$ 11,071	$ 6,256

Deferred revenue is shown as a current liability on the Company's balance sheet.

As of April 30, 2020 unbilled services was $2.4 million and deferred revenue was $5.8 million.

Note 4. Property and Equipment

Property and equipment consisted of the following (in thousands):

	April 30,	
	2022	2021
Furniture and fixtures	$ 246	$ 246
Computer equipment and software	1,667	1,461
Laboratory equipment	8,618	6,640
Capitalized software development costs	1,888	484
Assets in progress	181	1,211
Leasehold improvements	111	4
Total property and equipment	12,711	10,046
Less: Accumulated depreciation and amortization	(5,577)	(3,956)
Property and equipment, net	$ 7,134	$ 6,090

Depreciation and amortization expense was $1.6 million and $1.2 million for the years ended April 30, 2022 and 2021, respectively. Depreciation and amortization expense, excluding expense recorded under finance leases, was $1.5 million and $925,000 for the years ended April 30, 2022 and 2021.

As of April 30, 2022 and 2021, property, plant and equipment included gross assets held under finance leases of $713,000 and $343,000, respectively. Related depreciation expense for these assets was $87,000 and $124,000 for the years ended April 30, 2022 and 2021.

Capitalized software development costs under a hosting arrangement

The Company accounts for the cost of computer software obtained or developed for internal use as well as the software development and implementation costs associated with a hosting arrangement ("internal-use software") that is a service contract in accordance and with ASC 350, *Intangibles - Goodwill and Other* ("ASC-350"). We capitalize certain costs in the development of our internal-use software when the preliminary project stage is completed and it is probable that the project itself will be completed and the software will perform as intended. These capitalized costs include personnel and related expenses for employees and costs of third-party consultants who are directly associated with and who devote time to these internal-use software projects. Capitalization of these costs ceases once the project is substantially complete and the software is ready for its intended purpose. Costs incurred for significant upgrades, increased functionality, and enhancements to the Company's internal-use software solutions are also capitalized. Costs incurred for training, maintenance, and minor modifications are expensed as incurred. Capitalized software development costs are amortized using the straight-line method over an estimated useful economic life of three years.

The Company has capitalized development and implementation costs in accordance with accounting guidance for its Lumin Bioinformatics platform ("Lumin"). Lumin is the Company's new oncology data-driven software program and data tool which is operates as Software as a Service (SaaS). These capitalized costs represent salaries, including direct payroll-related costs, certain software development consultant expenses and molecular sequencing programming costs incurred in the engineering and coding of the software development. Capitalized costs are classified as assets in progress during the development process until development is complete and the asset is available for sale. The initial version of the Lumin platform was launched during fiscal year 2021, at which time initial capitalization ceased and amortization commenced. The total Lumin assest placed into service and available for sale as of July 31, 2020 was $484,000.

The Company continued to develop increased functionality, expand product design and usability, and add enhancements to the Lumin platform. In accordance with accounting guidance, these costs were capitalized. This developmental work did not render the initial released version to be obsolete or diminished in value but, rather, added to the base functionality of the existing platform. During the third quarter of fiscal year 2022, these capitalized costs were placed into

service as the enhanced version was launched and made available for sale. The total cost of the enhanced Lumin asset placed into service and available for sale as of January 31, 2022 was $1.4 million, bringing the total capitalized gross asset investment to $1.9 million. Amortization expense related to this asset addition was $317,000 and $134,000 for the years ended April 30, 2022 and 2021, respectively.

Finance Lease

During fiscal 2020, the Company entered into a finance lease for laboratory equipment. The lease had costs of approximately $231,000, at inception, through November 2020. This lease expired December 2020. Prior to expiration, the monthly finance lease payment was approximately $19,000. The future minimum lease payments remaining under this finance lease at April 30, 2021 and 2020 were zero and $135,000, respectively. The present value of minimum future obligations was calculated based on interest rate of 4.75%. Depreciation and amortization expense related to this finance lease was zero and $124,000 for the years ended April 30, 2022 and 2021, respectively.

During fiscal 2022, the Company recognized a finance lease for laboratory equipment. This equipment was obtained as the result of a laboratory supplies purchase commitment with costs of approximately $370,000 at inception through December 2025. Cash payments for this lease are in the form of consideration for purchasing lab supplies under a purchase commitment agreement. The present value of the minimum future obligations of $370,000 was calculated based on an interest rate of 3.25%. Depreciation and amortization expense related to this finance lease was $87,000 and zero for the years ended April 30, 2022 and 2021, respectively.

Note 5. Revenue from Contracts with Customers

Oncology Services Revenue

The following table represents disaggregated revenue for the twelve months ended April 30, 2022 and 2021:

	Year Ended April 30,	
	2022	2021
Pharmacology services	$ 46,833	$ 39,473
Other TOS revenue	2,227	1,401
Personalized oncology services	49	166
Total oncology services revenue	$ 49,109	$ 41,040

Other TOS revenue represents additional services provided to the Company's pharmaceutical and biotechnology customers, specifically flow cytometry services and SaaS provided via our Lumin Bioinformatics software.

Contract Balances

Contract assets include unbilled amounts typically resulting from revenue recognized in excess of the amounts billed to the customer for which the right to payment is subject to factors other than the passage of time. These amounts may not exceed their net realizable value. Contract assets are classified as current. Contract liabilities consist of customer payments received in advance of performance and billings in excess of revenue recognized, net of revenue recognized from the balance at the beginning of the period. Contract assets and liabilities are presented on the balance sheet on a net contract-by-contract basis at the end of each reporting period. Refer to Note 3 for related balances.

Note 6. Significant Customers

For the years ended April 30, 2022 and 2021, one and none of our customers accounted for more than 10% of our total revenue, respectively.

As of April 30, 2022, one customer accounted for 17% of our total accounts receivable balance. As of April 30, 2021, no customers accounted for 10% or more of our total accounts receivable balance.

Note 7. Commitments and Contingencies

Legal Matters

The Company is not currently party to any legal matters to its knowledge. The Company is not aware of any other matters that would have a material impact on the Company's financial position or results of operations.

Registration Payment Arrangements

The Company has entered into an Amended and Restated Registration Rights Agreement in connection with the March 2015 Private Placement. This Amended and Restated Registration Rights Agreement contains provisions that may call for the Company to pay penalties in certain circumstances. This registration payment arrangement primarily relates to the Company's ability to file a registration statement within a particular time period, have a registration statement declared effective within a particular time period and to maintain the effectiveness of the registration statement for a particular time period. The Company has not accrued any liquidated damages associated with the Amended and Restated Registration Right Agreement as the Company has filed the required registration statement and anticipates continued compliance with the agreement.

Royalties

The Company contracts with third-party vendors to license tumor samples for development into PDX models and use in our TOS business. These types of arrangements have an upfront fee ranging from approximately nil to $30,000 per tumor sample depending on the successful growth of the tumor model and ability to develop them into a sellable product. The upfront costs are expensed as incurred. In addition, under certain agreements, for a limited period of time, the Company is subject to royalty payments if the licensed tumor models are used for sale in our TOS business, ranging from 2% to 20% of the contract price after recouping certain initiation costs. Some of these arrangements also set forth an annual minimum royalty due regardless of tumor models used for sale. For the years ended April 30, 2022 and 2021, we have recognized approximately $401,000 and $127,000 in expense related to these royalty arrangements, respectively.

Note 8. Stock-based Payments

Stock-based compensation in the amount of $912,000 and $598,000 was recognized for years ended April 30, 2022 and 2021, respectively. Stock-based compensation costs were recorded as follows (in thousands):

	Year Ended April 30,	
	2022	2021
General and administrative	$ 563	$ 292
Sales and marketing	189	199
Research and development	18	23
TOS cost of sales	142	84
Total stock-based compensation expense	$ 912	$ 598

The Company has in place a 2021 Equity Incentive Plan, 2010 Equity Incentive Plan and 2008 Equity Incentive Plan ("the Plans"). In general, these plans provide for stock-based compensation to the Company's employees, directors and non-employees. The plans also provide for limits on the aggregate number of shares that may be granted, the term of grants and the strike price of option awards.

2021 Equity Incentive Plan

As part of the 2021 Annual Shareholders Meeting, shareholders approved the adoption of the 2021 Equity Incentive Plan ("2021 Equity Plan"). The purpose of the 2021 Equity Plan is to grant (i) Non-statutory Stock Options; (ii) Incentive Stock Options; (iii) Restricted Stock Awards; and/or (iv) Stock Appreciation Rights (collectively, stock-based compensation) to its employees, directors and non-employees. Total stock awards under the 2021 Equity Plan shall not exceed 2 million shares of common stock. Options and Stock Appreciation Rights expire no later than ten years from the date of grant and the awards vest as determined by the Board of Directors. Options and Stock Appreciation Rights have a strike price not less than 100% of the

fair market value of the common stock subject to the option or right at the date of grant. As of April 30, 2022, approximately 1.8 million shares were left to issue under this plan.

2010 Equity Incentive Plan

On February 18, 2011, shareholders owning a majority of the issued and outstanding shares of the Company executed a written consent approving the 2010 Equity Incentive Plan ("2010 Equity Plan"). The purpose of the 2010 Equity Plan is to grant (i) Non-statutory Stock Options; (ii) Restricted Stock Awards; and (iii) Stock Appreciation Rights (collectively, stock-based compensation) to its employees, directors and non-employees. Total stock awards under the 2010 Equity Plan shall not exceed 30,000,000 shares of common stock. Options and Stock Appreciation Rights expire no later than ten years from the date of grant and the awards vest as determined by the Board of Directors. Options and Stock Appreciation Rights have a strike price not less than 100% of the fair market value of the common stock subject to the option or right at the date of grant. After February 2021, no more shares were available to be issued from this plan.

2008 Equity Incentive Plan

The Company has previously granted (i) Non-statutory Stock Options; (ii) Restricted Stock Awards; and (iii) Stock Appreciation Rights (collectively, stock-based compensation) to its employees, directors and non-employees under a 2008 Equity Incentive Plan (the "2008 Equity Plan"). Such awards may be granted by the Company's Board of Directors. Options granted under the 2008 Equity Plan expire no later than ten years from the date of grant and the awards vest as determined by the Board of Directors.

For stock-based payments to non-employee consultants under the Plans, the fair value of the stock-based consideration issued is used to measure the transaction, as management believes this to be a more reliable measure of fair value than the services received. The fair value of the award is expensed over the period service is provided to the Company; however, it is ultimately measured at the price of the Company's common stock or the fair value of stock options using the Black-Scholes valuation model on the date that the commitment for performance by the non-employee consultant has been reached or performance is complete, which is generally the vesting date of the award. After 2018, no more shares were available to be issued from this plan.

Director Compensation Plan

On December 12, 2013, the Compensation Committee of the Board of Directors of the Company adopted changes to the Director Compensation Plan of 2010 (the "Director Plan") effective December 1, 2013. Under the Director Plan, independent directors of the Company are entitled to an annual award of a five-year option to purchase 8,333 shares of the Company's common stock, and the Chairman of the Board of the Company is entitled to an annual award of a five-year option to purchase 16,667 shares of the Company's common stock. Independent directors who serve as chairperson of a committee will also receive an annual grant of a five-year option to purchase 1,667 shares of the Company's common stock. All options issued under the Director Plan vest quarterly at a rate of 25%. Option grants will typically be issued after the annual shareholder meeting which will generally be held in October of each year. New directors will receive a grant upon joining the Board equal to the pro-rata annual grant for the remainder of the year. Options issued under the Director Plan are now issued pursuant to the 2021 Equity Plan.

Stock Option Grants

Black-Scholes assumptions used to calculate the fair value of options granted during the years ended April 30, 2022 and 2021 were as follows:

	Year Ended April 30,	
	2022	**2021**
Expected term in years	6	3 - 6
Risk-free interest rates	0.8% - 1.2%	0.1% - 0.5%
Volatility	64% - 66%	70% - 75%
Dividend yield	—%	—%

The weighted average fair value of stock options granted during the years ending April 30, 2022 and 2021, was $5.56 and $5.11, respectively. The Company's stock options activity and related information as of and for the years ended April 30, 2022 and 2021 is as follows:

	Directors and Employees	Non-Employees	Total	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding, May 1, 2021	1,618,231	35,415	1,653,646	$ 3.96	5.4	$ 11,384,000
Granted	155,552	10,500	166,052	9.44	9.3	$ —
Exercised	(108,375)	—	(108,375)	2.29		
Canceled	(11,209)	—	(11,209)	4.71		
Forfeited	(36,875)	—	(36,875)	7.45		
Expired	—	(5,000)	(5,000)	9.60		
Outstanding, April 30, 2022	1,617,324	40,915	1,658,239	4.51	4.9	$ 6,131,000
Vested and expected to vest as of April 30, 2022	1,617,324	40,915	1,658,239	4.51	4.9	$ 6,131,000
Vested as of April 30, 2022	1,349,895	4,584	1,354,479	3.93	4.2	$ 5,778,000

	Directors and Employees	Non-Employees	Total	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding, May 1, 2020	2,228,326	43,332	2,271,658	$ 3.23	5.0	$ 10,663,000
Granted	135,834	—	135,834	9.24	7.3	259,000
Exercised	(686,178)	(1,160)	(687,338)	2.33		
Canceled	(47,751)	(923)	(48,674)	6.03		
Forfeited	(12,000)	—	(12,000)	7.48		
Expired	—	(5,834)	(5,834)	10.80		
Outstanding, April 30, 2021	1,618,231	35,415	1,653,646	3.96	5.4	$ 11,384,000
Vested and expected to vest as of April 30, 2021	1,618,231	35,415	1,653,646	3.96	5.4	$ 11,384,000
Vested as of April 30, 2021	1,323,270	9,584	1,332,854	3.34	4.8	$ 9,995,000

Note 9. Provision for Income Taxes

The components of the provision for income taxes are as follows (in thousands):

	Year Ended April 30, 2022			
	Federal	State	Foreign	Total
Current	$ —	$ 10	$ 25	$ 35
Total	$ —	$ 10	$ 25	$ 35

	Year Ended April 30, 2021			
	Federal	State	Foreign	Total
Current	$ —	$ 13	$ 62	$ 75
Total	$ —	$ 13	$ 62	$ 75

A reconciliation between the Company's effective tax rate and the United States statutory tax rate for the years ended April 30, 2022 and 2021 is as follows:

	Year Ended April 30,	
	2022	2021
Federal income tax at statutory rate	21.0 %	21.0 %
US vs. foreign tax rate difference	1.3	0.5
State income tax, net of federal benefit	3.3	80.8
Permanent differences	(47.3)	(61.5)
Increase in uncertain tax position	—	0.7
Change in valuation allowance	27.7	(24.3)
Income tax expense	6.0 %	17.2 %

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities as of April 30, 2022 and 2021 consist of the following (in thousands):

	As of April 30,	
	2022	2021
Accrued liabilities	$ 162	$ 232
Right of use, net asset/liability	316	271
Depreciation and amortization	(396)	(206)
Stock-based compensation expense	3,874	3,640
Net operating loss carry-forward	11,546	11,404
Total deferred tax assets	15,502	15,341
Less: Valuation allowance	(15,502)	(15,341)
Net deferred tax asset	$ —	$ —

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed into law. The Act contains several new or changed income tax provisions, including but not limited to the following: increased limitation threshold for determining deductible interest expense; class life changes to qualified improvements (in general, from 39 years to 15 years); and the ability to carry back net operating losses incurred from tax years 2018 through 2020 up to the five preceding tax years. The Company has evaluated the new tax provisions of the CARES Act and determined the impact to be either immaterial or not applicable.

Management has evaluated the available evidence about future tax planning strategies, taxable income, and other possible sources of realization of deferred tax assets and has established a full valuation allowance against its net deferred tax assets as of April 30, 2022 and 2021. For the years ended April 30, 2022 and 2021, the Company recorded a valuation allowance of $15.5 million and $15.3 million, respectively.

As of April 30, 2022 and 2021, the Company's estimated U.S. net operating loss carry-forwards were approximately $48.0 million and $46.9 million, respectively. Net operating losses generated prior to May 1, 2018 have a 20-year carryforward and will begin expiring in 2025 for federal and 2031 for state purposes. Losses generated in the fiscal years since the year ended April 30, 2019 may be carried forward indefinitely. A valuation allowance has been recorded against all of these loss carryforwards.

Under the provisions of the Internal Revenue Code, certain substantial changes in the Company's ownership may result in a limitation on the amount of net operating losses that may be utilized in future years. During the fiscal year ended April 30, 2013, approximately $12.0 million of the Company's net operating losses became subject to limitation under Internal Revenue Code Section 382 in connection with an ownership change on January 28, 2013. As a result of the ownership change, the Company's annual limitation on its use of net operating loss carry-forwards is approximately $432,000.

The Company files income tax returns in various jurisdictions with varying statutes of limitations. As of April 30, 2022, the earliest tax year still subject to examination for state purposes is fiscal 2018. The Company's tax years for periods ending April 30, 2002 and forward are subject to examination by the United States and certain states due to the carry-forward of unutilized net operating losses.

The following table indicates the changes to the Company's uncertain tax positions for the period and years ended April 30, 2022 and 2021 in thousands:

	Year Ended April 30,	
	2022	2021
Balance, beginning of the year	$ 181	$ 178
Addition based on tax positions related to prior years	—	—
Payment made on tax positions related to prior years	—	—
Addition based on tax positions related to current year	—	3
Balance, end of year	$ 181	$ 181

As of April 30, 2022 and 2021, the above amounts of $181,000 for each fiscal year were included in other long-term liabilities.

Note 10. Earnings Per Share

A reconciliation of net income and number of shares used in computing basic and diluted earnings per share was as follows:

	Year Ended April 30,	
	2022	2021
Basic and diluted net income per share computation (dollars in thousands):		
Net income attributable to common stockholders	$ 548	$ 362
Weighted Average common shares - basic	13,197,170	13,138,995
Basic net income per share	$ 0.04	$ 0.03
Diluted income per share computation		
Net income attributable to common stockholders	$ 548	$ 362
Income available to common stockholders	$ 548	$ 362
Weighted Average common shares	13,197,170	13,138,995
Incremental shares from assumed exercise of warrants and stock options	962,629	1,434,566
Adjusted weighted average share – diluted	14,159,799	14,573,561
Diluted net income per share	$ 0.04	$ 0.02

The following table reflects the total potential stock-based instruments outstanding at April 30, 2022 and 2021 that could have an effect on the future computation of dilution per common share. These figures were not included in the above calculation as, to do so, would be antidilutive:

	Year Ended April 30	
	2022	2021
Stock options	1,332,854	1,653,646
Total common stock equivalents	1,332,854	1,653,646

Note 11. Related Party Transactions

Related party transactions include transactions between the Company and its shareholders, management, or affiliates. The following transactions were in the normal course of operations and were measured at the exchange amount, which is the amount of consideration established and agreed to by the parties.

Consulting Services

For both years ended April 30, 2022 and 2021, the Company paid a member of its Board of Directors $36,000 and $54,000 for consulting services unrelated to his duties as a board member. During the years ended April 30, 2022 and 2021, the Company paid another board member $17,000 and $5,500, respectively, for consulting services unrelated to his duties as a board member. All of the amounts paid to these related parties have been recognized in expense in the period the services were performed.

Note 12. Leases

The Company accounts for its leases under ASC 842. Under this guidance, arrangements meeting the definition of a lease are classified as operating or financing leases, and are recorded on the consolidated balance sheet as both an operating lease ROU asset and operating lease liability, calculated by discounting fixed lease payments over the lease term at the rate implicit in the lease or the Company's incremental borrowing rate. Lease liabilities are increased by interest and reduced by payments each period, and the right of use asset is amortized over the lease term. For operating leases, interest on the lease liability and the amortization of the right of use asset result in straight-line rent expense over the lease term. Variable lease expenses, if any, are recorded when incurred. The Company has elected to apply the short-term lease exemption practical expedient for each class of underlying assets and excludes short-term leases having initial terms of 12 months or less. The Company recognizes rent

expense on a straight-line basis over the lease term for these short-term leases. The Company has determined that no material embedded leases exist. Under ASC 842, the Company determines if an arrangement is a lease at inception. ROU assets and liabilities are recognized at commencement date based on the present value of remaining lease payments over the lease term. For this purpose, the Company considers only payments that are fixed and determinable at the time of commencement. As the Company's leases do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments.

Operating Leases

The Company currently leases certain office equipment and its office and laboratory facilities under non-cancelable operating leases. Rent expense for operating leases is recognized on a straight-line basis over the lease term from the lease commencement date through the scheduled expiration date. Rent expenses totaled $1.9 million and $1.3 million for the years ended April 30, 2022 and 2021, respectively.

The Company leases the following facilities:

- One University Plaza, Suite 307, Hackensack, New Jersey 07601, which, since November 2011, serves as the Company’s corporate headquarters. The lease was renewed during fiscal 2022 and expires in November 2026. The Company recognized $88,000 and $91,000 of rent expense relative to this lease for fiscal 2022 and 2021, respectively.
- 1330 Piccard Drive Suite 025, Rockville, MD 20850, which consists of laboratory and office space where the Company conducts operations related to its primary service offerings. The Company executed this lease (the "Original Premises") on January 11, 2017. The operating commencement date was August 11, 2017. This lease originally expired in August 2028.
    - On March 30, 2020, the Company executed the first amendment to this lease to expand the existing premises at 1330 Piccard Drive, Suite 025 ("Expansion Premises") to add on Suites 050 and 104. This amendment also extended the current lease term by six months. The Expansion Premises operating lease commencement date was June 1, 2020 and, under the amendment, both leases expire February 28, 2029.
    - In accordance with ASC 842, the Company evaluated the first amendment and also performed a reassessment of the existing lease for Suite 025 to determine the impact of the six-month term extension. As a result of this assessment, the Company recognized an additional operating ROU asset and related operating lease liability for Suite 025 of $118,000 and $125,000, respectively, as well as an incremental net rent expense of $8,000 during the three months ended July 31, 2020. The Company did not recognize the incremental rental expense under this amendment during fiscal 2020 as the Expansion Premises lease commencement date was during fiscal 2021.
    - Upon the Expansion Premises operating lease commencement date (June 1, 2020), the Company recognized an operating ROU asset and related operating lease liability for Suites 050 and 104 of $3.8 million, each, respectively.
    - On December 22, 2020, the Company executed the second amendment to this lease to expand the existing premises at 1330 Piccard Drive, Suites 025, 050, and 104 ("Additional Expansion Premises") and add on Suite 201. The Additional Expansion Premises operating lease commencement date was April 1, 2021 and, under the second amendment, reaffirms that all three leases expire February 28, 2029. Upon the Additional Expansion Premises operating lease commencement date (April 1, 2021), the Company also recognized an operating ROU asset and related operating lease liability for Suite 201 of $3.3 million, each, respectively.
    - For the leases related to the premises at Piccard Drive, the Company recognized $1.7 million and $1.2 million of rental expense for fiscal 2022 and 2021, respectively.
- 1405 Research Boulevard, Suite 125, Rockville, Maryland 20850 (“New Location”), which consisted of laboratory and office space where the Company conducted operations related to its primary service offerings. The Company executed this lease on November 1, 2018. The operating commencement date was January 17, 2019. This lease was set to expire in April 2024. The Company terminated this lease on June 30, 2020 and transitioned its activities from this location to the Expansion Premises, as defined above, during the first quarter of fiscal 2021. Upon lease termination, the Company recognized a decrease in the related operating ROU asset and operating lease liability of approximately $850,000 and $926,000, respectively, as well as a gain on lease termination of $76,000. The Company recognized zero and $43,000 of rental expense for fiscal 2022 and 2021, respectively.
- VIA LEONE XIII, 14, Milan, Italy, which consists of laboratory and office space where the Company conducts operations related to its flow cytometry service offerings. The Company executed the lease for its laboratory space in June 2021, and commenced occupancy during the three months ended October 31, 2021. This lease expires May 2023. The Company executed the lease for its office space on October 1, 2021. This lease expires September 2027.
    - The Company recognized an operating ROU asset and related operating lease liability for the lab and office space of $205,000 each, respectively.
    - The Company recognized rental costs associated with these leases of $81,000 and zero for fiscal 2022 and 2021, respectively.

ROU assets and lease liabilities related to our current operating leases are as follows (in thousands):

	April 30, 2022	April 30, 2021
Operating lease right-of-use assets, net	8,230	8,521
Current portion of operating lease liabilities	1,054	818
Non-current portion of operating lease liabilities	8,412	8,783

As of April 30, 2022, the weighted average remaining operating lease term and the weighted average discount rate were 6.7 years and 5.73%, respectively.

Future minimum lease payments due each fiscal year as follows (in thousands):

2023	$	2,735
2024		2,809
2025		2,848
2026		2,895
2027		2,860
Thereafter		5,164
Total undiscounted liabilities		19,311
Less: Imputed interest		(9,845)
Present value of minimum lease payments	$	9,466

Refer to Note 4, Property and Equipment, for more information on financing leases.

Exhibit Index

Exhibit No.	
3.1	Amended and Restated Articles of Incorporation (incorporated by reference to Appendix A to the Company's Information Statement on Schedule 14C filed March 7, 2011)
3.1.1	Certificate of Amendment to Amended and Restated Articles of Incorporation (incorporated by reference to Exhibit 3(i) to the Company's Current Report on Form 8-K filed April 28, 2015)
3.2	Amended and Restated Bylaws, as amended (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed May 9, 2017)
4.1	Description of Registered Securities (incorporated by reference to Exhibit 4.1 to the Company's Annual Report on Form 10-K filed July 28, 2020)
10.1	Employment Agreement, dated November 5, 2013, between the Company and Ronnie Morris, M.D. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed November 12, 2013)
10.2	Amendment to Employment Agreement, dated March 16, 2015, between the Company and Ronnie Morris (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed March 20, 2015)
10.3	Offer letter dated June 3, 2013 between the Company and David Miller (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 3, 2013)
10.4	2010 Equity Incentive Plan (incorporated by reference to Appendix B to the Company's Definitive Information Statement on Schedule 14C filed March 7, 2011)
10.5	Form of Note Purchase Agreement, dated December 1, 2014, between the Company and each of Joel Ackerman and Ronnie Morris (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 5, 2014)
10.6	Form of Convertible Promissory Note, dated December 1, 2014, issued to each of Joel Ackerman and Ronnie Morris in connection with the Note Purchase Agreement, dated December 1, 2014 between the Company and each of Joel Ackerman and Ronnie Morris incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed December 5, 2014)
10.7	Amendment No. 1 to Convertible Promissory Note, dated December 1, 2014 issued to Joel Ackerman in connection with the Note Purchase Agreement, dated December , 2014, between the Company and each of Joel Ackerman and Ronnie Morris (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 2, 2015)
10.8	Amendment No. 1 to Convertible Promissory Note, dated December 1, 2014 issued to Ronnie Morris in connection with the Note Purchase Agreement, dated December , 2014, between the Company and each of Joel Ackerman and Ronnie Morris (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed March 2, 2015)
10.9	Amended and Restated 2011 Securities Purchase Agreement, dated March 13, 2015, between the Company and each person or entities that are signatories to the Securities Purchase Agreement, dated March 24, 2011, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.10	Form of warrant issued to each person or entities that are signatories to the Securities Purchase Agreement, dated March 24, 2011, between the Company and each investor identified on the signature page thereto (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed January 30, 2013)
10.11	Amendment No. 1 to warrants, dated March 13, 2015, between the Company and each person or entities that are signatories to the Securities Purchase Agreement, dated March 24, 2011, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed March 17, 2015)

10.12	Amended and Restated 2013 Securities Purchase Agreement, dated March 13, 2015, between the Company and each person or entities that are signatories to the Securities Purchase Agreement, dated January 28, 2013, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.13	Form of warrant issued to each person or entities that are signatories to the Securities Purchase Agreement, dated January 28, 2013, between the Company and each investor identified on the signature page thereto (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed January 30, 2013)
10.14	Amendment No. 1 to warrants, dated March 13, 2015, between the Company and each person or entities that are signatories to the Securities Purchase Agreement, dated January 28, 2013, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.15	Put Right Agreement, dated January 29, 2014, between the Company and each of Joel Ackerman and Ronnie Morris (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed March 6, 2014)
10.16	Securities Purchase Agreement, dated March 11, 2015, between the Company and each investor identified on the signature pages thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 12, 2015)
10.17	Amended and Restated Registration Rights Agreement, dated March 13, 2015, between the Company and each person or entities that are signatories to (i) the Securities Purchase Agreement, dated March 24, 2011, between the Company and each investor identified on the signature page thereto, (ii) the Securities Purchase Agreement, dated January 28, 2013, between the Company and each investor identified on the signature page thereto, and (iii) the Securities Purchase Agreement, dated March 11, 2015, between the Company. And each investor identified on the signature page thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.18	Form of Investor Warrant issued to each person or entities that are signatories to the Securities Purchase Agreement, dated March 11, 2015, between the Company and each investor identified on the signature page thereto (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed March 17, 2015)
10.19	Option Exchange Agreement, dated March 16, 2015, between the Company and Joel Ackerman (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 20, 2015)
10.20	Option Exchange Agreement, dated March 16, 2015, between the Company and Ronnie Morris (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed March 20, 2015)
10.21	Option Exchange Agreement, dated March 16, 2015, between the Company and David Miller (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed March 20, 2015)
14	Code of Ethics (incorporated by reference to Exhibit 14 of the April 30, 2008 Form 10-KSB)
21	List of Subsidiaries (incorporated by reference to Exhibit 21 of the Company's Form 10-K filed July 28, 2017)
23.1	Consent of Independent Registered Public Accounting Firm*
31.1	Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer*
31.2	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer*
32.1	Section 1350 Certifications**
101.INS*	XBRL Instance Document.
101.SCH*	XBRL Taxonomy Extension Schema Document.
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.

101.LAB*	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.

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* Filed herewith

** Furnished hereto.