SECURITIES & EXCHANGE COMMISSION EDGAR FILING

SIMULATIONS PLUS INC

Form: 10-K

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K

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

For the fiscal year ended August 31, 2019

or

o 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: 001-32046

Simulations Plus, Inc.
(Exact name of registrant as specified in its charter)

California	**95-4595609**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
42505 Tenth Street West **Lancaster, CA 93534-7059**	**(661) 723-7723**
(Address of principal executive offices including zip code)	(Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, par value $0.001 per share	**NASDAQ Stock Market LLC**

SECURITIES REGISTERED PURSUANT TO SECTION 12(G) OF THE ACT: NONE

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

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 o No x

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 filings requirements for the past 90 days. Yes x No o

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes x No o

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

Large accelerated filer o	Accelerated filer x
Non-accelerated filer o	Smaller reporting company x
Emerging growth company o	

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. o

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of February 28, 2019, based upon the closing price of the common stock as reported by The Nasdaq Capital Market on such date, was approximately $246,955,803. This calculation does not reflect a determination that persons are affiliates for any other purposes.

As of November 13, 2019, 17,623,324 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's definitive proxy statement to be delivered to its shareholders in connection with the registrant's 2019 Annual Meeting of Shareholders are incorporated by reference into Part III of this Form 10-K. Such definitive proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year covered by this annual report on Form 10-K.

Simulations Plus, Inc.
FORM 10-K
For the Fiscal Year Ended August 31, 2019

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Forward-Looking Statements

This document and the documents incorporated in this document by reference contain forward-looking statements that are subject to risks and uncertainties. All statements other than statements of historical fact contained in this document and the materials accompanying this document are forward-looking statements.

The forward-looking statements are based on the beliefs of our management, as well as assumptions made by and information currently available to our management. Frequently, but not always, forward-looking statements are identified by the use of the future tense and by words such as “believes,” expects,” “anticipates,” “intends,” “will,” “may,” “could,” “would,” “projects,” “continues,” “estimates” or similar expressions. Forward-looking statements are not guarantees of future performance and actual results could differ materially from those indicated by the forward-looking statements. Forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause our or our industry’s actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by the forward-looking statements.

The forward-looking statements contained or incorporated by reference in this document are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (“Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (“Exchange Act”) and are subject to the safe harbor created by the Private Securities Litigation Reform Act of 1995. These statements include declarations regarding our plans, intentions, beliefs, or current expectations.

Among the important factors that could cause actual results to differ materially from those indicated by forward-looking statements are the risks and uncertainties described under “Risk Factors” in our Annual Report and elsewhere in this document and in our other filings with the SEC.

Forward-looking statements are expressly qualified in their entirety by this cautionary statement. The forward-looking statements included in this document are made as of the date of this document and we do not undertake any obligation to update forward-looking statements to reflect new information, subsequent events, or otherwise.

PART I

ITEM 1 –BUSINESS

As used in this report, each of the terms “we,” “us,” “our,” the “Company” and “Simulations Plus” refers to Simulations Plus, Inc. and its wholly owned subsidiaries Cognigen Corporation, of Buffalo, New York, and DILIsym Services, Inc of Research Triangle Park, North Carolina, unless otherwise stated or the context otherwise requires.

OVERVIEW

Simulations Plus, Inc., incorporated in 1996, is a premier developer of drug discovery and development software for mechanistic modeling and simulation, and for machine-learning-based prediction of properties of molecules solely from their structure. Our pharmaceutical/chemistry software is licensed to major pharmaceutical, biotechnology, agrochemical, cosmetics, and food industry companies and to regulatory agencies worldwide for use in the conduct of industry-based research. We also provide consulting services ranging from early drug discovery through preclinical and clinical trial data analysis and for submissions to regulatory agencies. Simulations Plus is headquartered in Southern California, with offices in Buffalo, New York, and Research Triangle Park, North Carolina, and its common stock trades on the Nasdaq Capital Market under the symbol “SLP.”

We are a global leader focused on improving the ways scientists use knowledge and data to predict the properties and outcomes of pharmaceutical and biotechnology agents and provide a wide range of early discovery, preclinical, and clinical consulting services and software. Our innovations in integrating new and existing science in medicinal chemistry, computational chemistry, pharmaceutical science, biology, physiology, and machine learning into our software have made us the leading software provider for PBPK modeling and simulation, prediction of molecular properties from structure, and prediction of drugs to induce liver injury or to treat nonalcoholic fatty liver disease.

We generate revenue by delivering relevant, cost-effective software and creative and insightful consulting services. Pharmaceutical and biotechnology companies use our software programs and scientific consulting services to guide early drug discovery (molecule design and screening), preclinical, and clinical development programs. They also use our software products and services to enhance their understanding of the properties of potential new medicines and to use emerging data to improve formulations, select and justify dosing regimens, support the generics industry, optimize clinical trial designs, and simulate outcomes in special populations, such as the elderly and pediatric patients.

Simulations Plus acquired Cognigen Corporation (Cognigen) as a wholly owned subsidiary in September 2014. Cognigen was originally incorporated in 1992. Through the integration of Cognigen into Simulations Plus, Simulations Plus became a leading provider of population modeling and simulation contract research services for the pharmaceutical and biotechnology industries. Our clinical-pharmacology-based consulting services include pharmacokinetic and pharmacodynamic modeling, clinical trial simulations, data programming, and technical writing services in support of regulatory submissions. We have also developed software for harnessing cloud-based computing in support of modeling and simulation activities and secure data archiving, and we provide consulting services to improve interdisciplinary collaborations and research and development productivity.

Simulation Plus acquired DILIsym Services, Inc. (DILIsym) as a wholly owned subsidiary in June 2017. The acquisition of DILIsym positions the Company as the leading provider of Drug Induced Liver Injury (DILI) modeling and simulation software and related scientific consulting services. In addition to the DILIsym® software for analysis of potential drug-induced liver injury, DILIsym Services, Inc. also has developed a simulation program for analyzing nonalcoholic fatty liver disease (NAFLD) called NAFLDsym™. Both the DILIsym and NAFLDsym software programs require outputs from physiologically based pharmacokinetics (PBPK) software as inputs. The GastroPlus™ PBPK software from Simulations Plus provides such information; thus, the integration of these technologies will provide a seamless capability for analyzing the potential for drug-induced liver injury for new drug compounds and for investigating the potential for new therapeutic agents to treat nonalcoholic fatty liver disease. Since the acquisition, DILIsym has applied its mechanistic modeling resources in other disease areas including idiopathic pulmonary fibrosis (IPF) and others.

PRODUCTS

General

We currently offer ten software products for pharmaceutical research and development: five simulation programs that provide time-dependent results based on solving large sets of differential equations: GastroPlus®; DDDPlus™; MembranePlus™; DILIsym®; and NAFLDsym™; three programs that are based on predicting and analyzing static (not time-dependent) properties of chemicals: ADMET Predictor®; MedChem Designer™; and MedChem Studio™ (the combination of ADMET Predictor, MedChem Designer, and MedChem Studio is called our ADMET Design Suite™); a program which is designed for rapid clinical trial data analysis and regulatory submissions called PKPlus™; and a program called KIWI™ from our Cognigen division that provides an integrated platform for data analysis and reporting through our proprietary secure cloud.

GastroPlus®

Our flagship product, originally introduced in 1998, and currently our largest single source of software revenue, is GastroPlus. GastroPlus mechanistically simulates the absorption, pharmacokinetics, pharmacodynamics, and drug-drug interactions of compounds administered to humans and animals and is currently the most widely used commercial software of its type by pharmaceutical companies, the U.S. Food and Drug Administration (FDA), the U.S. National Institutes of Health (NIH), and other government agencies in the U.S. and other countries. In May 2019, we were pleased to announce the Pharmaceuticals and Medical Devices Agency (PMDA) in Japan added licenses to the GastroPlus software suite.

Because of the widespread use of GastroPlus, we were the only non-European company invited to join the European Innovative Medicines Initiative (IMI) program for Oral Bioavailability Tools (OrBiTo). OrBiTo was an international collaboration among 27 industry, academic, and government organizations working in the area of oral absorption of pharmaceutical products. Because we are outside of the European Union, our participation in this project was at our own expense, while other members were compensated for their work; however, we were a full member with access to all of the data and discussions of all other members. We believe our investment to participate in this initiative enabled us to benefit from, and to contribute to, advancing the prediction of human oral bioavailability from preclinical data, and ensured that we are well-known to member pharmaceutical companies and regulatory agencies.

In September 2014, we entered into a research collaboration agreement (RCA) with the FDA to enhance the Ocular Compartmental Absorption and Transit (OCAT™) model within the Additional Dosage Routes Module of GastroPlus. The objective of this agreement was to provide a tool for generic companies and the FDA to assess the likely bioequivalence of generic drug formulations dosed to the eye. Under this RCA, we received up to $200,000 per year. This RCA could be renewed for up to a total of three years based on the progress achieved during the project. After a successful second year, the RCA was extended for two additional years in September 2016, with primary tasks completed in September 2018. Additional functionality was further requested by the FDA, and a new funded contract was awarded for the 2018-19 period.

We were awarded another RCA by the FDA in September 2015; this one to expand the capabilities of GastroPlus to simulate the dosing of long-acting injectable microspheres for both small and large molecules (biologics). This type of dosage form is usually injected via subcutaneous or intramuscular routes. This RCA also provides up to $200,000 per year for up to three years. Under this agreement, we are developing simulation models to deal with the very slow dissolution/decomposition of the microsphere carrier material that gradually releases the active drug over periods as long as weeks or months. After a successful second year, the RCA was renewed for the third year in September 2017 and was completed in September 2018, with further extensions under consideration with the FDA and/or large pharmaceutical company sponsor(s).

In September 2018, we were pleased to announce that we were awarded another funded RCA by the FDA to integrate drug product quality attributes into the mechanistic TCAT model in GastroPlus. This grant award, for $250,000 per year for up to two years, will focus on the incorporation of drug product quality attributes into dermal physiologically-based pharmacokinetic (PBPK) models developed for dermatological topical dosage forms and transdermal delivery systems.

In July 2018 we entered into a one-year funded research collaboration with a large European consortium to further develop and validate the mechanistic Transdermal Compartmental Absorption and Transit (TCAT™) model in GastroPlus. This project will contribute substantially to improvements in the program, specifically directed toward the predictions of local exposure within the skin layer following topical administration of various chemicals. We expect the developments under this agreement will aid companies and regulatory agencies as they strive to implement an animal-free chemical safety assessment program.

In addition to the two active funded efforts with the FDA described above, we also have two unfunded RCAs with the FDA: one with the Office of Generic Drugs (OGD) that began in 2014, and one announced in July 2019 with the Center for Veterinary Medicine (CVM). With OGD, the objective is directed toward the FDA's evaluation of mechanistic IVIVCs (*in vitro-in vivo* correlations) to determine whether mechanistic absorption modeling (MAM) can relate laboratory (*in vitro*) dissolution experiment results to the behavior of dosage forms in humans and animals (*in vivo*) better than traditional empirical methods. With CVM, the objective is to use GastroPlus, with *in vitro* and *in vivo* data, to investigate how bioequivalence (BE) of non-systemically absorbed products can be evaluated in canines without the need for clinical endpoint trials.

In May 2018, we released Version 9.6 of GastroPlus. Version 9.6 provided the following new functionalities and advanced decision-making tools for preclinical and early clinical trial simulation and modeling analysis:

- New dynamic intestinal fluid options added to the #1-ranked ACAT™ oral absorption model
- New population physiologies for obesity and renal impairment disease states
- Expanded enzyme/transporter distribution information for easier extrapolation across species
- Additional compound model files for standard drug-drug interaction (DDI) substrates & inhibitors
- Upgraded capabilities to all major mechanistic absorption routes, including dermal, pulmonary, ocular, and subcutaneous/intramuscular injections
- Enhanced deconvolution methods for generation of mechanistic *in vitro-in vivo* correlations (IVIVCs)
- Improved output/reporting functions in all simulation modes to facilitate communication across departments and with regulatory agencies
- Significant simulation speed improvements
- Custom template generation for seamless use of GastroPlus to drive DILIsym® SimPops™ liver injury predictions

Our goal with GastroPlus is to integrate the most advanced science into user-friendly software to enable researchers and regulators to perform sophisticated analyses of complex compound behaviors in humans and laboratory animals. Already the most widely used program in the world for PBPK modeling, the addition of these new capabilities is expected to expand the user base in the early pharmaceutical research and development process, while also helping us to further penetrate biopharmaceuticals, food, cosmetics, and general toxicology markets. We work to release updated versions of the program on an ongoing basis. In May 2018, we released Version 9.6 of GastroPlus, and Version 9.7 was released in June 2019. This version adds a number of important new capabilities, including improvements to population simulations, dissolution, absorption, PBPK models, and drug-drug interactions, among others.

- The ability to add lysosomal trapping effect to PBPK tissues
- New mechanistic pregnancy PBPK model (with fetus compartment)
- Additional solubility inputs for different drug forms (crystalline, amorphous)
- New models of standard compounds (substrates/inhibitors/inducers) in DDI Module
- Expanded fed state conditions based on meal type

- New ability to allow different tissue model types (perfusion- or permeability-limited) between parent and metabolites or victim perpetrator in metabolite tracking/DDI simulations
- PK-PD model additions to PKPlus Module
- Updates to the dermal absorption (TCAT) model through Cosmetics Europe project
- New effect of immune response with intramuscular injection models
- Updated default populations for extensive, intermediate, and poor metabolizers based on specific genotypes

DDDPlus™

DDDPlus mechanistically simulates *in vitro* (laboratory) experiments that measure the rate of dissolution of a drug as well as, if desired, the additives (excipients) in a particular dosage form (e.g., powder, tablet, capsule, or injectable solids) under a variety of experimental conditions. This unique software program is used by formulation scientists in industry and the FDA to (1) understand the physical mechanisms affecting the disintegration and dissolution rates of various formulations, (2) reduce the number of cut-and-try attempts to design new drug formulations, (3) design *in vitro* dissolution experiments to better mimic *in vivo* (animal and human) conditions, and (4) justify product specifications. Version 6.0 of DDDPlus was released in January 2019 and offers a series of new capabilities, including:

- simulation of the *in vitro* dissolution of long-acting injectable dosage forms (funded by the FDA grant supporting GastroPlus development)
- simulation of the *in vitro* dissolution of controlled release bead formulations
- new simulation of artificial stomach-duodenum (ASD) experiments
- ability to fit models from precipitation experiments
- new dissolution apparatus models
- improved output reporting

MembranePlus™

Similar to DDDPlus, MembranePlus mechanistically simulates laboratory experiments, but in this case, the experiments are for measuring permeability or clearance of drug-like molecules through various membranes, including several different standard cell cultures (Caco-2, MDCK), as well as hepatocytes. The value of such simulations derives from the fact that when the same molecules are measured in different laboratories using (supposedly) the same experimental conditions, the results are often significantly different. These differences are caused by a complex interplay of factors in how the experiment was set up and run. MembranePlus simulates these experiments with their specific experimental details, and this enables scientists to better interpret how results from specific experimental protocols can be used to predict permeability or clearance mechanisms in human and animals.

PKPlus™

In August 2016, we released a standalone software product called PKPlus, based on the internal PKPlus Module in GastroPlus that has been available since 2000. The PKPlus Module in GastroPlus provides quick and easy fitting of compartmental pharmacokinetic (PK) models as well as a simple noncompartmental analysis (NCA) for intravenous and extravascular (oral, dermal, ocular, pulmonary, etc.) doses; however, the PKPlus Module in GastroPlus was not designed to meet all of the requirements for performing these analyses for Phase 2 and 3 clinical trials, nor to produce report-quality output for regulatory submissions. The standalone PKPlus program provides the full level of functionality needed by pharmaceutical industry scientists to perform the analyses and generate the outputs needed to fully satisfy regulatory agency requirements for both more complex NCA as well as compartmental PK modeling.

PKPlus version 2.5 was released in July 2019. This new version incorporates a wide variety of requested features from current users, including:

- Import CDISC SEND packages with PC domain as source data
- Improved command line functionality
- 64-bit system optimization for improved performance
- Streamlined auto-reports
- Additional workflow refinements

Starting with version 2.0, we provide PKPlus for free to academics because we believe it will help educate the next generation of scientists entering the industries we serve and drive demand for the product. Hundreds of copies of PKPlus have been downloaded by universities around the world to date.

ADMET Predictor®

ADMET (Absorption, Distribution, Metabolism, Excretion, and Toxicity) Predictor is a chemistry-based computer program that takes molecular structures (i.e., drawings of molecules represented in various formats) as inputs and uses machine learning technology to predict approximately 150 different properties for them at an average rate of over 100,000 compounds per hour on a modern laptop computer. This capability allows chemists to generate estimates for a large number of important molecular properties without the need to synthesize and test the molecules, as well as to generate estimates of unknown properties for molecules that have been synthesized, but for which only a limited number of experimental properties have been measured. Thus, a chemist can assess the likely success of a large number of existing molecules in a company's chemical library, as well as molecules that have never been made, by providing only their molecular structures, either by drawing them using a tool such as our MedChem Designer software, or by automatically generating large numbers of molecules using various computer algorithms, including those embedded in our MedChem Studio software.

ADMET Predictor has been top-ranked for predictive accuracy in multiple peer-reviewed, independent comparison studies for many years, while generating its results at a very high throughput rate. Although the state of the art of this type of software does not enable identifying the best molecule in a series, it does allow early screening of molecules that are highly likely to fail as potential drug candidates (i.e., the worst molecules, which is typically the majority of a virtual chemical library) before synthesizing and testing them. Thus, millions of virtual compounds can be created and screened in a day, compared to potentially months or years of work to actually synthesize and test a much smaller number of actual compounds.

The optional ADMET Modeler™ Module in ADMET Predictor enables scientists to use their own experimental data to quickly create proprietary high-quality predictive models using the same powerful artificial intelligence (AI) engine we use to build our top-ranked property predictions. Pharmaceutical companies expend substantial time and money conducting a wide variety of experiments on new molecules each year, generating large databases of experimental data. Using this proprietary data to build predictive models can provide a second return on their investment; however, model building has traditionally been a difficult and tedious activity performed by specialists. The automation in ADMET Modeler makes it easy for a scientist to create very powerful machine-learning/AI models with minimal training.

Version 9.5 was released in April 2019, adding:

- Novel approaches to calculate uncertainty estimates on all regression models
- New machine learning models for important metabolism and transporter endpoints
- New machine learning models for AMES mutagenicity, a primary toxicity endpoint required during risk assessment
- New Structure Sensitivity Analysis visualization tool to easily map atom-level contributions to model predictions
- Improved rat-specific models to more accurately inform HTPK Simulation predictions
- Improved Pipeline Pilot and KNIME components to extend deployment options and enterprise support for ADMET Predictor
- Updates to output displays in MedChem Designer™

We have made significant investments in two key areas with recent versions: improving integration of our top-ranked ADMET Predictor and GastroPlus models to leverage our novel 'Discovery PBPK' approaches for chemists and safety researchers, and further enhancing our best-in-class machine learning engine to assist with drug discovery. Recent publications from pharmaceutical and chemical companies describing how they have leveraged our 'Discovery PBPK' methods to guide lead optimization and risk assessment illustrate how our unique offerings provide substantial value in these spaces. In April 2019, we were pleased to announce the U.S. Food and Drug Administration's (FDA) Center for Tobacco Products procured a 15-user license to the ADMET Predictor software suite. The purchase was made to support research projects aimed at informing regulatory decision making.

Potential new markets for artificial intelligence (machine learning)

We are currently investigating applications of our sophisticated artificial intelligence (machine-learning) engine outside of our normal pharmaceutical markets. To date, we have conducted several proof-of-concept studies involving aerodynamics and also classifying of patients as healthy or experiencing some disease state or genetic disorder evidenced by magnetic resonance imaging (MRI) of the brain.

We believe our proprietary AI/machine learning software engine has a wide variety of potential applications and we intend to pursue funding to develop customized tools to further monetize our investment in this technology by expanding our markets beyond the life sciences and chemistry. In addition, we are examining a variety of expanded capabilities to add to the basic modeling engine to accommodate even larger data sets ("big data analytics") and new applications.

MedChem Designer™

MedChem Designer was initially a molecule-drawing program, or "sketcher", but now has capabilities far exceeding those of other molecule-drawing programs because of its integration with both MedChem Studio and ADMET Predictor. We provide MedChem Designer for free because we believe that in the long run it will help to increase demand for ADMET Predictor and MedChem Studio, and because most other existing molecule-drawing programs are also provided for free. Our free version includes a small set of ADMET Predictor's best-in-class property predictions, allowing the chemist to modify molecular structures and then see a few key properties very quickly. With a paid ADMET Predictor license, the chemist would see the entire approximately 150 predictions that are available. Over 28,000 copies of MedChem Designer have been downloaded by scientists around the world to date.

When used with a license for ADMET Predictor, MedChem Designer becomes a *de novo* molecule design tool. With it, a researcher can draw one or more molecular structures, then click on the ADMET Predictor icon and have approximately 150 properties for each structure calculated in seconds, including our proprietary ADMET Risk™ index which provides a single number that instantly compare the effects of different structural changes in many dimensions. Researchers can also click on an icon to generate the likely metabolites of a molecule and then predict all of the properties of those metabolites from ADMET Predictor, including each of their ADMET Risk scores. This is important because a metabolite of a molecule can be therapeutically beneficial (or harmful) even though the parent molecule is not.

MedChem Studio™

The MedChem Studio Module in ADMET Predictor is a powerful software tool that is used both for data mining and for *de novo* design of new molecules. In its data-mining role, MedChem Studio facilitates searching large chemical libraries to find molecules that contain identified substructures, and it enables rapid identification of clusters (classes) of molecules that share common substructures.

While MedChem Designer can be used to refine a small number of molecules, the MedChem Studio Module can be used to create and screen very large numbers of molecules down to a few promising lead candidates. MedChem Studio has features that enable it to generate new molecular structures using a variety of *de novo* design methods. When MedChem Studio is used with ADMET Predictor and MedChem Designer (the combination of which we refer to as our ADMET Design Suite), we believe the programs provide an unmatched capability for chemists to search through large libraries of compounds that have undergone high-throughput screening experiments to find the most promising classes (groups of molecules with a large common part of their structures) and molecules that are active against a particular target. In addition, MedChem Studio can take an interesting (but not acceptable) molecule and, using a variety of design algorithms, quickly generate many thousands to millions of high-quality analogs (similar new molecules). These molecules can then be screened using ADMET Predictor to find molecules that are predicted to be both active against the target and acceptable in a variety of ADMET properties. We demonstrated the power of the ADMET Design Suite during two NCE (new chemical entity) projects wherein we designed lead molecules to inhibit the growth of the plasmodium falciparum malaria parasite in one study, and lead molecules that were able to inhibit two targets at the same time: COX-1 and COX-2. In each case, we announced ahead of time that we were attempting to do this, and we reported the results when the projects were complete. Every molecule we designed and had synthesized hit their targets in both projects, clearly demonstrating the power of the ADMET Design Suite.

KIWI™

Drug development programs rely increasingly on modeling and simulation analyses to support decision-making and submissions to regulatory agencies. To ensure high-quality analyses, organizations must not only apply high-quality science, but must also be able to support the science by being able to validate the results. KIWI is a cloud-based web application that was developed to efficiently organize, process, maintain, and communicate the volume of data and results generated by pharmacologists and scientists over the duration of a drug development program. The validated workflow and tools within KIWI promote traceability and reproducibility of results.

The pharmaceutical industry has been rapidly adopting cloud technology as a solution to ever-expanding computer processing needs. Leveraging our 20-plus years of experience in providing an architecture supporting modeling and simulation efforts, we have developed KIWI as a secure, validated, enterprise-scale environment, enabling global teams to collaborate on model-based decision making. KIWI has proven to be a valuable platform for encouraging interdisciplinary discussions about the model development process and interpretation of results. We continue to receive positive feedback about the functionality implemented in KIWI and the value of the approach we have taken to harness cloud technology. We continue to improve functionality and collaboration within the KIWI platform, and we expect the licensing fee will be a source of recurring revenue for further development and growth.

We release new versions of the program on a regular basis. KIWI Version 2 was released in December 2017 , KIWI 3 was released in August 2018, and in 2019 Q1, an enhanced editor and grouping of visualizations for easy replication was added, resulting in streamlined model development.

KIWI 4 was released in June 2019. A pharmacometric analysis is an evolutionary process – one that often results in the creation of hundreds of new program files and code changes to hundreds more due to common typographical and programmatic errors. The Model Wizard and the Covariate Analysis toolset aim to significantly reduce the time spent creating models, correcting errors, and replicating program files for performing stepwise covariate analyses, allowing pharmacometricians to focus on advancing science. With continued feedback from KIWI license holders, various visualizations within KIWI 4.0 and the pharmacometric-specific Data Repository continue to be updated with new features and functionality. In 2020 Q1, incremental improvements to the existing KIWI functionality have been added to improve graph appearance in both the Visualize and Explore modules.

We continue enhancing KIWI as part of our five-year, almost-$5 million contract with the Bill and Melinda Gates Foundation.

DILIsym

The DILIsym software is a quantitative systems pharmacology (QSP) program that has been in development since 2011. QSP software models are based on the fundamental understanding of complex biological pathways, disease processes, and drug mechanisms of action, integrating information from experiments and forming hypotheses for the next experimental model. DILIsym deals with the propensity for some drug molecules to induce temporary or permanent changes in biological functions within liver cells (hepatocytes) that can result in damage to the liver. Some drugs cause temporary changes in liver function but the body soon compensates and liver function returns to normal. Other drugs cause liver function to permanently decline as they continue to be taken. The DILIsym software models a variety of interactions within the hepatocytes to determine whether a particular drug molecule interrupts normal signaling pathways in a manner to induce injury to the cells.

Version 8A of the DILIsym software was released in January of 2019. This version is again delivered as a secure executable that incorporates new proprietary code enabling tighter integration with our GastroPlus PBPK software. Securing the code is necessary to ensure that results are consistent across all users to assure regulatory agencies that the calculated results are from a validated version. Open source programs are subject to modification by the user and so each use could have a different set of calculations, so validation would not be assured. In addition, a number of important new capabilities were added:

- 10 New validation compounds
- New Cholestatic liver injury mechanism
- New Oxidative stress (ROS) NRF2 adaptation response framework
- New Human SimPops with variability in bilirubin processing pathways
- New Liver injury biomarker GLDH
- Live DILIsym documentation website updated with new training resources

NAFLDsym

Where DILIsym is used to investigate the likelihood that a known drug molecule would cause injury to the liver, NAFLDsym is concerned with a liver that is already diseased (NAFLD/NASH) by excess fat, fibrosis, and inflammation, and investigates the likelihood that various molecules might provide beneficial therapeutic benefits to treat or cure the disease. DILIsym can be considered a “shrink wrap” software product, usable across many companies and drug development projects. NAFLDsym, on the other hand, requires modification for each of a number of different mechanisms of action that potential new drug compounds could use to treat the disease, and so is a customized tool used in consulting projects for each new client project. NAFLDsym version 2A was released in the summer of 2019 for licensing and consulting use. The software now includes the three most important components of NAFLD/NASH: steatosis, inflammation, and fibrosis, along with a host of other important updates.

RENAsym

Where DILIsym is used to investigate the likelihood that a known drug molecule would cause injury to the liver, RENAsym will be focused on investigating and predicting drug-induced kidney injury, or acute kidney injury (AKI). RENAsym will be another “shrink wrap” software product, usable across many companies and drug development projects. The software will utilize predictions of drug exposure in the kidney from PBPK platforms such as GastroPlus, along with in vitro data related to certain kidney injury mechanisms, to make predictions. The first expected release of RENAsym will be available towards the end of 2020. The initial development is being funded via an NIH small business grant.

IPFsym

IPFsym is a software tool that will investigate the likelihood that various molecules might provide beneficial therapeutic benefits to treat or cure idiopathic pulmonary fibrosis (IPF). IPFsym, like NAFLDsym, requires modification for each of a number of different mechanisms of action that potential new drug compounds could use to treat the disease, and so is a customized tool used in consulting projects for each new client project. IPFsym is targeted for release for licensing and consulting use sometime in 2021. The software will include the most important mechanisms of IPF and will be closely coupled with GastroPlus for drug concentration predictions within the lungs.

In January 2019 DILIsym Services and Simulations Plus entered into a two-year, $2.7 million collaboration with a large pharmaceutical company on the development of a new Quantitative Systems Pharmacology (QSP) model that will provide the ability to predict the efficacy of drugs being developed to treat idiopathic pulmonary fibrosis (IPF). Part of this funding will go towards expansion of GastroPlus to improve the predictions of compound exposure upon inhalation of drugs.

Contract Research and Consulting Services

Our scientists and engineers have expertise in drug absorption via various dosing routes (oral, intravenous, subcutaneous, intramuscular, ocular, nasal/pulmonary, and dermal), pharmacokinetics, pharmacodynamics, and drug-drug interactions. They have attended over 200 scientific meetings worldwide in the past four years, often speaking and presenting. We conduct contracted consulting studies for large customers (including many of the top twenty pharmaceutical companies) who have particularly difficult problems and who recognize our expertise in solving them, as well as for smaller customers who prefer to have studies run by our scientists rather than to license our software and train someone to use it. The demand for our consulting services has been steadily increasing, and we have expanded our consulting teams to meet the increased workload.

Currently we are entering year four of a five-year consulting agreement with the Bill and Melinda Gates Foundation to implement a platform for coordinating the data generated by global teams engaged in model-based drug development.

We have a reputation for high-quality analyses and regulatory reporting of data collected during preclinical experiments as well as clinical trials of new and existing pharmaceutical products, typically working on 80-100 drug projects per year. Traditionally, the model-based analysis of clinical trial data was different from the modeling analysis offered by GastroPlus or our quantitative systems toxicology/pharmacology software (DILIsym and NAFLDsym); the former relied more on statistical and semi-mechanistic models, whereas the latter is based on very detailed mechanistic models. Statistical models rely on direct observation and mathematical equations that are used to fit data collected across multiple studies along with describing the variability within and between patients. Mechanistic models are based on a detailed understanding of the human body and the chemistry of the drug and involve deep mathematical and scientific representation of the phenomena involved in drug dissolution/precipitation, absorption, distribution, metabolism, and elimination. Collectively, the models support safety and efficacy decisions, first-in-human estimations, formulation optimization, and drug-drug interaction assessments. Beginning in 2014, the U.S. F.D.A and other regulatory agencies began to emphasize the need to push mechanistic PBPK modeling and simulation into clinical pharmacology, with final guidance documents completed in 2018, and we have seen the benefit of having our clinical pharmacology teams across all three divisions working together to achieve this goal.

PRODUCT DEVELOPMENT

Development of our software is focused on expanding product lines, designing enhancements to our core technologies, and integrating existing and new products into our principal software architecture and platform technologies. We intend to continue to offer regular updates to our products and to continue to look for opportunities to expand our existing suite of products and services.

To date, we have developed products internally, sometimes also licensing or acquiring products, or portions of products, from third parties. These arrangements sometimes require that we pay royalties to third parties. We intend to continue to license or otherwise acquire technology or products from third parties when it makes business sense to do so. We currently have one license agreement, pursuant to which a small royalty is paid based on revenues on each license for the Metabolism Module in ADMET Predictor.

In 1997 we entered into an exclusive software licensing agreement with TSRL, Inc. (Therapeutic Systems Research Laboratories) pursuant to which TSRL licensed certain software technology and databases to us, and we paid royalties to TSRL. On May 15, 2014, we and TSRL entered into a termination and nonassertion agreement pursuant to which the parties agreed to terminate the 1997 exclusive software licensing agreement. As a result, the Company obtained a perpetual right to use certain source code and data, and TSRL relinquished any rights and claims to any GastroPlus products and to any claims to royalties or other payments under that agreement, and we agreed to pay TSRL total consideration of $6,000,000. All payments were made as of April 2017. The total consideration is being amortized at a constant rate of $150,000 per quarter until it is completely amortized, after which no further expense will be incurred. To date, this has resulted in expense savings over $1,750,000 compared to the royalty payments that would have been paid to TSRL if paid consistent with past practices.

MARKETING AND DISTRIBUTION

We distribute our products and offer our services in North America, South America, Europe, Japan, Australia, New Zealand, India, Singapore, Taiwan, Korea, and the People's Republic of China.

We market our pharmaceutical software and consulting services through attendance and presentations at scientific meetings, exhibits at trade shows, seminars at pharmaceutical companies and government agencies, through our website, and using various communication channels to our database of prospects and customers. At various scientific meetings around the world each year there are numerous presentations and posters presented in which the reported research was performed using our software. Many of these presentations are from industry and FDA scientists; some are from our staff. In addition, more than 100 peer-reviewed scientific journal articles, posters, and podium presentations are typically published each year using our software, mostly by our customers, further supporting its use in a wide range of preclinical and clinical studies.

Our sales and marketing efforts are handled primarily internally by sales and marketing staff and with our scientific team and several senior management staff assisting our marketing and sales staff with trade shows, seminars, and customer trainings both online and on-site. We also have independent distributors in Japan, China, India, and Korea who also sell and market our products with support from our scientists and engineers.

We provide support to the GastroPlus User Group in Japan, which was organized by Japanese researchers in 2009. In early 2013, a group of scientists in Europe and North America organized another GastroPlus User Group following the example set in Japan. Over 1,000 members have joined this group to date. We support this group through coordination of online meetings each month and managing the user group web site for exchange of information among members. These user groups provide us valuable feedback with respect to desired new features and suggested interface changes.

PRODUCTION

Our pharmaceutical software products are designed and developed by our development teams in California, North Carolina (Research Triangle Park), and New York (Buffalo), we also employee people who are able to work remotely using collaboration software. Our products and services are now delivered electronically – we no longer provide CD-ROMs and printed manuals or reports.

COMPETITION

In our pharmaceutical software and services business, we compete against a number of established companies that provide screening, testing and research services, and products that are not based on simulation software. There are also software companies whose products do not compete directly with, but are sometimes closely related to, ours. Our competitors in this field include some companies with financial, personnel, research, and marketing resources that are larger than ours. Our flagship product, GastroPlus, is the most widely used commercial PBPK modeling platform and has one significant competitor; others could be developed over time, but with the high barrier to entry, it would be difficult to validate new software to levels required to support regulatory submissions. Our PKPlus software product competes with one major and a few minor software programs. MedChem Studio, MedChem Designer, and ADMET Predictor/ADMET Modeler operate in a more competitive environment. Several other companies presently offer simulation or modeling software, or simulation-software-based services, to the pharmaceutical industry. We believe DILIsym and NAFLDsym enjoy a unique market position, with no significant competition.

Major pharmaceutical companies conduct drug discovery and development efforts through their internal development staffs and through outsourcing. Smaller companies generally need to outsource a greater percentage of this research. Thus, we compete not only with other software suppliers and scientific consulting service providers, but also with the in-house development and scientific consulting teams at some of the larger pharmaceutical companies.

Although competitive products exist, both new licenses and license renewals for GastroPlus have continued to grow. We believe that we enjoy a dominant market share in this segment. We believe our ADMET Predictor/ADMET Modeler, MedChem Studio, MedChem Designer, DDDPlus, MembranePlus, PKPlus, KIWI, DILIsym, and NAFLDsym software offerings are each unique in their combination of capabilities and remain a focus of our marketing strategy.

Based on our technical knowledge and expertise, the Company is strategically placed to offer modeling and simulation consulting services to companies. Our clients seek out our services for multiple reasons: (1) to acquire scientific, therapeutic area related or modeling expertise that they do not have in-house, (2) to address an excess of modeling and simulation requirements beyond the capacity of in-house resources, (3) to fulfill their modeling requirements more efficiently than they could do in-house, and (4) to utilize our software when they do not have the in-house expertise to do so. We apply our software and assist companies in such areas as: physiologically based pharmacokinetic modeling (PBPK) , pharmacokinetic/pharmacodynamic (PK/PD) data analysis; and quantitative systems pharmacology/toxicology (QSP/T). We compete against numerous service providers, ranging from departments within large contract research organizations (CROs) to independent consulting organizations of various sizes as well as individual consultants.

We believe the key factors in our ability to successfully compete in this field are our ability to: (1) continue to invest in research and development, and develop and support industry-leading simulation and modeling software and related products and services,(2) develop and maintain a proprietary database of results of physical experiments that serve as a basis for simulated studies and empirical models, (3) continue to attract and retain a highly skilled scientific and engineering team, (4) aggressively promote our products and services to our global market, and (5) develop and maintain relationships with research and development departments of pharmaceutical companies, universities, and government agencies

In addition, we actively seek strategic acquisitions to expand both our pharmaceutical software and services business.

TRAINING AND TECHNICAL SUPPORT

Customer training and technical support are important factors in customer satisfaction for our pharmaceutical products, and we believe we are an industry leader in providing customer training and technical support in our business areas. We provide in-house seminars at customers' and potential customers' sites, as well at selected universities to train students who will soon be industry scientists. These seminars often serve as initial training in the event the potential customer decides to license or evaluate our software. Technical support is provided after the sale of any software in the form of on-site training (at the customer's expense), web meetings and telephone, fax, and e-mail assistance to the customer's users during the customer's license period.

Technical support for pharmaceutical software is provided by our life sciences teams and our inside sales and support staff via telephone, e-mail and web-based support for all of our pharmaceutical software products worldwide. Technical support for pharmaceutical software products sales is minimal, averaging a few person-hours per month.

We provide free telephone, e-mail and web-based support for all of our pharmaceutical software products worldwide from our offices in the U.S. Technical support for pharmaceutical software is provided by our life sciences teams and our inside sales and support staff. Technical support for pharmaceutical software products is generally minimal, averaging a few person-hour product sale.

RESEARCH AND DEVELOPMENT

Research and development (R&D) activities include both enhancement of existing products and development of new products. Development of new products and adding functionality to existing products are capitalized in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 985-20, "Costs of Software to Be Sold Leased, or Marketed". R&D expenditures, which primarily relate to both capitalized and expensed salaries, R&D supplies, laboratory testing, and R&D consulting, were approximately $4,264,000 during fiscal year 2019, of which $1,764,000 was capitalized. R&D expenditures were approximately $3,936,000 during fiscal year 2018, of which $2,145,000 was capitalized. R&D expenditures during fiscal year 2017 were approximately $2,743,000 of which $1,376,000 was capitalized.

CUSTOMERS

Our customers include large, medium-sized and smaller biotech and pharmaceutical companies, universities, and regulatory agencies and other government organizations. We concentrate on serving the needs of our customers in drug discovery, development, clinical trials, and post-patent generic formulation development. Our current customer base is highly fragmented, in 2019 two of our customers were each 8% and another was 7% of our revenues, with those exceptions no other customers made up more than 7% of our revenues in the last 3 years.

SEASONALITY

We have traditionally experienced seasonal revenue weakness during our fiscal fourth quarter (June-August) due to summer vacations and reduced activities at our customers' sites. Though our net sales figures for any quarter are not necessarily indicative of sales for any future period, our pharmaceutical software is typically licensed on an annual basis which means renewals usually fall in the same quarter year after year.

ENVIRONMENTAL MATTERS

We believe we are in compliance in all material respects with all applicable environmental laws. Presently, we do not anticipate that such compliance will have a material effect on capital expenditures, earnings or competitive position with respect to any of our operations.

EMPLOYEES

As of August 31, 2019, Simulations Plus and its subsidiaries Cognigen Corporation and DILIsym, employed a total of 111 persons, including 107 full-time employees and 4 part-time employees, consisting of 78 in scientific, technical and research and development, 8 in marketing and sales, and 25 in administration and accounting. Currently 52 employees hold Ph.Ds. in their respective science or engineering disciplines, and 24 employees hold one or more Master's degrees. Most of the senior management team and the members of our Board of Directors hold graduate degrees.

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 life sciences team although the competition for such personnel in the pharmaceutical industry is intense. None of our employees is represented by a labor union, and we have never experienced a work stoppage. We believe that our relations with our employees are good.

INTELLECTUAL PROPERTY AND OTHER PROPRIETARY RIGHTS

We primarily protect our intellectual property through copyrights and trade secrets. Our intellectual property consists primarily of source code for computer programs and data files for various applications of those programs in the pharmaceutical software businesses. The expertise of our staff is a considerable asset closely related to intellectual property, and attracting and retaining highly qualified scientists and engineers is essential to our business.

EFFECT OF GOVERNMENT REGULATIONS

Our pharmaceutical software products are tools used in research and development and are neither approved nor approvable by the FDA or other government agencies.

COMPANY WEBSITE

We maintain a corporate Internet website at: www.simulations-plus.com.

The contents of this website are not incorporated in or otherwise to be regarded as part of this Annual Report. We file reports with the SEC which are available on our website free of charge. These reports include annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, "Section 16" filings on Form 3, Form 4, and Form 5, and other related filings, each of which is provided on our website as soon as reasonably practical after we electronically file such materials with or furnish them to the SEC. In addition, the SEC maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including the Company.

ITEM 1A – RISK FACTORS

You should carefully consider the risks described below before investing in our publicly traded securities. The risks described below are not the only ones facing us. Our business is also subject to the risks that affect many other companies, such as competition, technological obsolescence, labor relations, general economic conditions, geopolitical changes, and international operations. We operate in a rapidly changing environment that involves a number of risks, some of which are beyond our control. Additional risks not currently known to us or that we currently believe are immaterial also may impair our business operations and our liquidity. The risks described below could cause our actual results to differ materially from those contained in the forward-looking statements we have made in this Annual Report on Form 10-K, the information incorporated herein by reference, and those forward-looking statements we may make from time to time. We note these factors for investors as permitted by the Private Securities Litigation Reform Act of 1995. You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider the following to be a complete discussion of all potential risks or uncertainties.

Certain Risks Related to Our Marketplace and Environment

Our ability to sustain or increase revenues will depend upon our success in entering new markets, continuing to increase our customer base, and in deriving additional revenues from our existing customers.

Our products are currently used primarily by molecular modeling and simulation specialists in pharmaceutical, biotechnology, agrotech, cosmetics, and government research organizations. One component of our overall business strategy is to derive more revenues from our existing customers by expanding their use of our products and services. Such strategy would have our customers utilize our scientific informatics platforms and our tools and components to leverage vast amounts of information stored in both corporate databases and public data sources in order to make informed scientific and business decisions during the research and development process. In addition, we seek to expand into new markets, and new areas within our existing markets, by acquiring businesses in these markets, attracting and retaining personnel knowledgeable in these markets, identifying the needs of these markets, and developing marketing programs to address these needs. If successfully implemented, these strategies would increase the usage of our software and services by biologists, chemists, engineers, and informaticians operating within our existing pharmaceutical, biotechnology, and chemical customers, as well as by new customers in other industries. However, if our strategies are not successfully implemented, our products and services may not achieve market acceptance or penetration in targeted new departments within our existing customers or in new industries. As a result, we may incur additional costs and expend additional resources without being able to sustain or increase revenue.

Consolidation within the pharmaceutical and biotechnology industries may continue to lead to fewer potential customers for our products and services.

A significant portion of our customer base consists of pharmaceutical and biotechnology companies. Consolidation within the pharmaceutical and biotechnology industries may result in fewer customers for our products and services. Although the industry consolidation that has taken place over the past 20 years has not prevented our business from growing to date, if one of the parties to a consolidation uses the products or services of our competitors, we may lose existing customers as a result of such consolidation.

Increasing competition and increasing costs within the pharmaceutical and biotechnology industries may affect the demand for our products and services, which may affect our results of operations and financial condition.

Our pharmaceutical and biotechnology customers' demand for our products is impacted by continued demand for their products and by our customers' research and development costs. Demand for our customers' products could decline, and prices charged by our customers for their products may decline, as a result of increasing competition, including competition from companies manufacturing generic drugs. In addition, our customers' expenses could continue to increase as a result of increasing costs of complying with government regulations and other factors. A decrease in demand for our customers' products, pricing pressures associated with the sales of these products and additional costs associated with product development could cause our customers to reduce research and development expenditures. Although our products increase productivity and reduce costs in many areas, because our products and services depend on such research and development expenditures, our revenues may be significantly reduced.

Health care reform and restrictions on reimbursement may affect the pharmaceutical, biotechnology, and industrial chemical companies that purchase or license our products or services, which may affect our results of operations and financial condition.

The continuing efforts of government and third-party payers in the markets we serve to contain or reduce the cost of health care may reduce the profitability of pharmaceutical, biotechnology, and industrial chemical companies, causing them to reduce research and development expenditures. Because some of our products and services depend on such research and development expenditures, our revenues may be significantly reduced. We cannot predict what actions federal, state, or private payers for health care goods and services may take in response to any health care reform proposals or legislation.

We face strong competition in the life science market for computer-aided design modeling and simulation software and for cheminformatics products.

The market for our computer-aided design modeling and simulation software products for the life science market is intensely 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. Many of our competitors offer products and services directed at more specific markets than those we target, enabling these competitors to focus a greater proportion of their efforts and resources on these markets. Some offerings that compete with our products are developed and made available at lower cost by government organizations and academic institutions, and these entities may be able to devote substantial resources to product development and also offer their products to users for little or no charge. 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. Moreover, we intend to leverage our scientific informatics platform in order to enable our customers to more effectively utilize the vast amounts of information stored in both their databases and public data sources in order to make informed scientific and business decisions during the research and development process. This strategy could lead to competition from much larger companies that provide general data storage and management 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 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.

We are subject to pricing pressures in some of the markets we serve.

The market for computer-aided design modeling and simulation products for the life science industry is intensely competitive. Although the average price of our software licenses has increased slightly or remained relatively constant for fiscal 2017, 2018, and 2019, we may experience a decline in the future. In response to increased competition and general adverse economic conditions in this market, we may be required to modify our pricing practices. Changes in our pricing model could adversely affect our revenue and earnings.

Our operations may be interrupted by the occurrence of a natural disaster or other catastrophic event at our primary facilities.

Our research and development operations and administrative functions are primarily conducted at our facilities in Lancaster, California, Buffalo, New York and Research Triangle Park, North Carolina. Although we have contingency plans in effect for natural disasters or other catastrophic events, the occurrence of such events could still disrupt our operations. For example, our Lancaster, California facility is located in a state that is particularly susceptible to earthquakes. Any natural disaster or catastrophic event in our facilities or the areas in which they are located could have a significant negative impact on our operations.

Our insurance coverage may not be sufficient to avoid material impact on our financial position or results of operations resulting from claims or liabilities against us, and we may not be able to obtain insurance coverage in the future.

We maintain insurance coverage for protection against many risks of liability. The extent of our insurance coverage is under continuous review and is modified as we deem it necessary. Despite this insurance, it is possible that claims or liabilities against us may have a material adverse impact on our financial position or results of operations. In addition, we may not be able to obtain any insurance coverage, or adequate insurance coverage, when our existing insurance coverage expires. For example, we do not carry earthquake insurance for our facilities in Lancaster, California, because we do not believe the costs of such insurance are reasonable in relation to the potential risk for our part of California.

Changes in government regulation or in practices relating to the pharmaceutical or biotechnology industries, including potential health care reform, could decrease the need for the services we provide.

Governmental agencies throughout the world, but particularly in the U.S., strictly regulate the drug development process. Our business involves helping pharmaceutical and biotechnology companies, among others, navigate the regulatory drug approval process. Accordingly, many regulations, and often new regulations, are expected to result in higher regulatory standards and often additional revenues for companies that service these industries. However, some changes in regulations, such as a relaxation in regulatory requirements or the introduction of streamlined or expedited drug approval procedures, or an increase in regulatory requirements that we have difficulty satisfying or that make our services less competitive, could eliminate or substantially reduce the demand for our services.

Any negative commentaries made by any regulatory agencies or any failure by us to comply with applicable regulations and related guidance could harm our reputation and operating results, and compliance with new regulations and guidance may result in additional costs.

Any negative commentaries made by any regulatory agencies or any failure on our part to comply with applicable regulations could result in the termination of ongoing research or the disqualification of data for submission to regulatory authorities. This could harm our reputation, our prospects for future work, and our operating results. If our operations are found to violate any applicable law or other governmental regulations, we might be subject to civil and criminal penalties, damages, and fines. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses, divert our management's attention from the operation of our business, and damage our reputation.

Many of our contracts are fixed-price and may be delayed or terminated or reduced in scope for reasons beyond our control, or we may underprice or overrun cost estimates with these contracts, potentially resulting in financial losses.

Many of our contracts provide for services on a fixed-price or fee-for-service with a cap basis and, accordingly, we bear the financial risk if we initially underprice our contracts or otherwise overrun our cost estimates. In addition, these contracts may be terminated or reduced in scope either immediately or upon notice. Cancellations may occur for a variety of reasons, and often at the discretion of the client. The loss, reduction in scope, or delay of a large contract or the loss or delay of multiple contracts could materially adversely affect our business, although our contracts frequently entitle us to receive the costs of winding down the terminated projects, as well as all fees earned by us up to the time of termination. Some contracts also entitle us to a predetermined termination fee and irrevocably committed costs/expenses.

We could experience a breach of the confidentiality of the information we hold or of the security of our computer systems.

We operate large and complex computer systems that contain significant amounts of client data. As a routine element of our business, we collect, analyze, and retain substantial amounts of data pertaining to the clinical study data analysis we conduct for our clients. Unauthorized third parties could attempt to gain entry to such computer systems for the purpose of stealing data or disrupting the systems. We believe that we have taken appropriate measures to protect them from intrusion, and we continue to improve and enhance our systems in this regard, but in the event that our efforts are unsuccessful, we could suffer significant harm. Our contracts with our clients typically contain provisions that require us to keep confidential the information generated from these studies. In the event the confidentiality of such information was compromised, we could suffer significant harm.

Impairment of goodwill or other intangible assets may adversely impact future results of operations.

We have intangible assets, including goodwill and other indefinite-lived intangibles, on our balance sheet due to our acquisitions of businesses. The initial identification and valuation of these intangible assets and the determination of the estimated useful lives at the time of acquisition involve use of management judgments and estimates. These estimates are based on, among other factors, input from accredited valuation consultants, reviews of projected future income cash flows and statutory regulations. The use of alternative estimates and assumptions might have increased or decreased the estimated fair value of our goodwill and other intangible assets that could potentially result in a different impact to our results of operations. 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 other indefinite-lived intangibles. To the extent goodwill or other indefinite-lived intangibles are impaired, their carrying value will be written down to its implied fair value and a charge will be made to our income from continuing operations. Such an impairment charge could materially and adversely affect our operating results. As of August 31, 2019, the carrying amount of goodwill and other intangibles was $10,387,198 on our consolidated balance sheet.

Certain Risks Related to Our Operations

Software defects or malfunctions in our products could hurt our reputation among our customers, result in delayed or lost revenue, and expose us to liability.

Our business and the level of customer acceptance of our products depend upon the continuous, effective, and reliable operation of our software and related tools and functions. To the extent that defects cause our software to malfunction and our customers' use of our products is interrupted, our reputation could suffer and our revenue could decline or be delayed while such defects are remedied. We may also be subject to liability for the defects and malfunctions of third-party technology partners and others with whom our products and services are integrated.

Delays in the release of new or enhanced products or services or undetected errors in our products or services may result in increased cost to us, delayed market acceptance of our products, and delayed or lost revenue.

To achieve market acceptance, new or enhanced products or services can require long development and testing periods, which may result in delays in scheduled introduction. Any delays in the release schedule for new or enhanced products or services may delay market acceptance of these products or services and may result in delays in new customer orders for these new or enhanced products or services or the loss of customer orders. In addition, new or enhanced products or services may contain a number of undetected errors or “bugs” when they are first released. Although we extensively test each new or enhanced software product or service before it is released to the market, there can be no assurance that significant errors will not be found in existing or future releases. As a result, in the months following the introduction of certain releases, we may need to devote significant resources to correct these errors. There can be no assurance, however, that all of these errors can be corrected.

We are subject to risks associated with the operation of a global business.

We derive a significant portion of our total revenue from our operations in international markets. During the years ended August 31, 2019, 2018 and 2017, 34%, 39% and 38% respectively, of our total revenue was derived from our international operations. Our global business may be affected by local economic conditions, including inflation, recession, and currency exchange rate fluctuations. In addition, political and economic changes, including international conflicts, including terrorist acts, throughout the world may interfere with our or our customers' activities in particular locations and result in a material adverse effect on our business, financial condition, and operating results. Potential trade restrictions, exchange controls, adverse tax consequences, and legal restrictions may affect the repatriation of funds into the U.S. Also, we could be subject to unexpected changes in regulatory requirements, the difficulties of compliance with a wide variety of foreign laws and regulations, potentially negative consequences from changes in or interpretations of U.S. and foreign tax laws, import and export licensing requirements, and longer accounts receivable cycles in certain foreign countries. These risks, individually or in the aggregate, could have an adverse effect on our results of operations and financial condition. For example, we are subject to compliance with the U.S. Foreign Corrupt Practices Act and similar anti-bribery laws, which generally prohibit companies and their intermediaries from making improper payments to foreign government officials for the purpose of obtaining or retaining business. While our employees, distributors, and agents are required to comply with these laws, we cannot be sure that our internal policies and procedures will always protect us from violations of these laws despite our commitment to legal compliance and corporate ethics. The occurrence or allegation of these types of risks may adversely affect our business, performance, prospects, value, financial condition, and results of operations.

The drug discovery and development services industry is highly competitive.

Our clinical pharmacology division often competes for business not only with other clinical research organization (CROs), but also with internal discovery and development departments within our larger clients, who may have greater resources than ours. We also compete with universities and teaching hospitals for outsourced services. We compete based on a variety of factors, including:

- reputation for on-time quality performance;
- reputation for regulatory compliance;
- expertise and experience in multiple specialized areas;
- scope and breadth of service and product offerings across the drug discovery and development spectrum;
- ability to provide flexible and customized solutions to support our clients' drug discovery and development needs;
- price/value;
- technological expertise and efficient drug development processes;
- financial stability;
- accessibility of client data through secure portals; and
- ability to acquire, process, analyze, and report data in an accurate manner.

If we do not compete successfully, our business could suffer. Increased competition might lead to price and other concessions that might adversely affect our operating results. The drug discovery and development services industry has continued to see a trend towards consolidation, particularly among biotechnology companies, who are targets for each other and for larger pharmaceutical companies. If this trend continues, it is likely to produce more competition among the larger companies and CROs generally, with respect to both clients and acquisition candidates. In addition, while there are substantial barriers to entry for large, global competitors with broad-based services, small, specialized entities considering entering the CRO industry will continue to find lower barriers to entry, and private equity firms may determine that there are opportunities to acquire and consolidate these companies, thus further increasing possible competition. More generally, our competitors or others might develop technologies, services, or products that are more effective or commercially attractive than our current or future technologies, services, or products, or that render our technologies, services, or products less competitive or obsolete. If competitors introduce superior technologies, services, or products and we cannot make enhancements to ours to remain competitive, our competitive position, and in turn our business, revenue, and financial condition, would be materially and adversely affected. In the aggregate, these competitive pressures may affect the attractiveness of our technologies, services, or products and could adversely affect our financial results.

Potential changes in U.S. and international tax law.

Tax proposals to reform corporate tax law are constantly being considered. Proposals include both increasing and reducing the corporate statutory tax rate, broadening the corporate tax base through the elimination or reduction of deductions, exclusions, and credits, implementing a territorial regime of taxation, limiting the ability of U.S. corporations to deduct interest expense associated with offshore earnings, modifying the foreign tax credit rules, and reducing the ability to defer U.S. tax on offshore earnings. These or other changes in the U.S. tax laws could increase our effective tax rate, which would affect our profitablity.

Contract research services create a risk of liability.

As a CRO, we face a range of potential liabilities which may include:

- Errors or omissions in reporting of study detail in preclinical studies that may lead to inaccurate reports, which may undermine the usefulness of a study or data from the study, or which may potentially advance studies absent the necessary support or inhibit studies from proceeding to the next level of testing; and

- Risks associated with our possible failure to properly care for our clients' property, such as research models, records, work in progress, or other archived materials.

Contractual risk transfer indemnifications generally do not protect us against liability arising from certain of our own actions, such as negligence or misconduct. We could be materially and adversely affected if we are required to pay damages or bear the costs of defending any claim that is outside any contractual indemnification provision, or if a party does not fulfill its indemnification obligations, or the damage is beyond the scope or level of insurance coverage. We also often contractually indemnify our clients (subject to a limitation of liability), similar to the way they indemnify us, and we may be materially adversely affected if we have to fulfill our indemnity obligations. Furthermore, there can be no assurance that we nor a party required to indemnify us will be able to maintain such insurance coverage (either at all or on terms acceptable to us).

Upgrading our software could result in implementation issues and business disruptions.

We update our software on a regular basis and in the process of refactoring our software programs. In doing so we face the possibility that existing users will find the software unacceptable, or new users may not be as interested as they have been in the past versions. Translation errors might introduce new software bugs that will not be caught.

The drug discovery and development industry has a history of patent and other intellectual property litigation, and we might be involved in costly intellectual property lawsuits.

The drug discovery and development industry has a history of patent and other intellectual property litigation and these lawsuits will likely continue. Accordingly, we face potential patent infringement suits by companies that have patents for similar products and methods used in business or other suits alleging infringement of their intellectual property rights. Legal proceedings relating to intellectual property could be expensive, take significant time and divert management's attention from other business concerns, whether we win or lose. If we do not prevail in an infringement lawsuit brought against us, we might have to pay substantial damages, including treble damages, and we could be required to stop the infringing activity or obtain a license to use technology on unfavorable terms.

We may not be able to successfully develop and market new services and products.

We may seek to develop and market new services and products that complement or expand our existing business or service offerings. We cannot guarantee that we will be able to identify new technologies of interest to our customers. Even if we are able to identify new technologies of interest, we may not be able to negotiate license agreements on acceptable terms, or at all. If we are unable to develop new services and products and/or create demand for those newly developed services and products, our future business, results of operations, financial condition, and cash flows could be adversely affected.

Ability to incur debt could adversely affect our business and growth prospects.

At August 31, 2019, we had no borrowed debt and have no need to do so to fund normal operations in the foreseeable future; however, should circumstances require us to incur debt and a lender could not be found to provide that debt, this could have a significant adverse effect on our business, including making it more difficult for us to obtain financing on favorable terms, limiting our ability to capitalize on significant business opportunities, and making us more vulnerable to rising interest rates.

We depend on key personnel and may not be able to retain these employees or recruit additional qualified personnel, which could harm our business.

Our success depends to a significant extent on the continued services of our senior management and other members of management. We have employment agreements with our CEO and division presidents that range from one to three years. If our CEO, our division presidents, or other members of senior management do not continue in their present positions, our business may suffer. Because of the specialized scientific nature of our business, we are highly dependent upon attracting and retaining qualified scientific and technical and managerial personnel. While we have a strong record of employee retention, there is still significant competition for qualified personnel in the software, pharmaceutical and biotechnology fields. Therefore, we may not be able to attract and retain the qualified personnel necessary for the development of our business. The loss of the services of existing personnel, as well as the failure to recruit additional key scientific, technical, and managerial personnel in a timely manner, could harm our business.

If we are not successful in selecting and integrating the businesses and technologies we acquire, or in managing our current and future divestitures, our business may suffer.

Over the years, we have expanded our business through acquisitions. We continue to search to acquire businesses and technologies and form strategic alliances. However, businesses and technologies may not be available on terms and conditions we find acceptable. We risk spending time and money investigating and negotiating with potential acquisition or alliance partners, but not completing transactions. Even if completed, acquisitions and alliances involve numerous risks which may include: difficulties in achieving business and continuing financial success; difficulties and expenses incurred in assimilating and integrating operations, services, products, technologies, or pre-existing relationships with our customers, distributors, and suppliers; challenges with developing and operating new businesses, including those which are materially different from our existing businesses and which may require the development or acquisition of new internal capabilities and expertise; challenges of maintaining staffing at the acquired entities, including loss of key employees; potential losses resulting from undiscovered liabilities of acquired companies that are not covered by the indemnification we may obtain from the seller(s); the presence or absence of adequate internal controls and/or significant fraud in the financial systems of acquired companies; diversion of management's attention from other business concerns; acquisitions could be dilutive to earnings, or in the event of acquisitions made through the issuance of our common stock to the shareholders of the acquired company, dilutive to the percentage of ownership of our existing shareholders; new technologies and products may be developed which cause businesses or assets we acquire to become less valuable; and risks that disagreements or disputes with prior owners of an acquired business, technology, service, or product may result in litigation expenses and distribution of our management's attention. In the event that an acquired business or technology or an alliance does not meet our expectations, our results of operations may be adversely affected.

Some of the same risks exist when we decide to sell a business, site, or product line. In addition, divestitures could involve additional risks, including the following: difficulties in the separation of operations, services, products, and personnel; and the need to agree to retain or assume certain current or future liabilities in order to complete the divestiture. We evaluate the performance and strategic fit of our businesses. These and any divestitures may result in significant write-offs, including those related to goodwill and other intangible assets, which could have an adverse effect on our results of operations and financial condition. In addition, we may encounter difficulty in finding buyers or alternative exit strategies at acceptable prices and terms and in a timely manner. We may not be successful in managing these or any other significant risks that we encounter in divesting a business, site, or product line, and as a result, we may not achieve some or all of the expected benefits of the divestitures.

Our quarterly and annual operating results fluctuate and may continue to fluctuate in the future, and if we fail to meet the expectations of analysts or investors, our stock price and the value of your investment could decline substantially.

We believe that operating results for any particular quarter are not necessarily a meaningful indication of future results. Nonetheless, fluctuations in our quarterly operating results could negatively affect the market price of our common stock. Our results of operations in any quarter or annual period have varied in the past and may vary from quarter to quarter or year to year and are influenced by such factors as:

- changes in the general global economy;
- the number and scope of ongoing client engagements; the commencement, postponement, delay, progress, completion, or cancellation of client contracts in the quarter;
- changes in customer budget cycles;
- the number and scope of ongoing client engagements;
- the commencement, postponement, delay, progress, completion, or cancellation of client contracts in the quarter;
- changes in the mix of our products and services;
- competitive pricing pressures;
- the extent of cost overruns;
- buying patterns of our clients;
- budget cycles of our clients;
- the effect of potential acquisitions and consequent integration;
- the timing of new product releases by us or our competitors;
- general economic factors, including factors relating to disruptions in the world credit and equity markets and the related impact on our customers' access to capital;
- changes in tax laws, rules, regulations, and tax rates in the locations in which we operate;
- the timing and charges associated with completed acquisitions and other events;
- the financial performance of the limited partnerships in which we invest; and
- exchange rate fluctuations.

We derive a significant percentage of our revenues from a concentrated group of customers and the loss of more than one of our major customers could materially and adversely affect our business, results of operations or financial condition.

Three customers accounted for 8%, 8% and 7% (a dealer account in Japan representing various customers) of net sales for fiscal year 2019. Four customers accounted for 9% (a dealer account in Japan representing various customers), 7%, 6% and 5% of net sales for fiscal year 2018. Three customers accounted for 7% (a dealer account in Japan representing various customers), 7%, and 5% of net sales for fiscal year 2017. The loss of any of our major customers could have a material adverse effect on our results of operations and financial condition. We may not be able to maintain our customer relationships, and our customers may delay payment under, or fail to renew, their agreements with us, which could adversely affect our business, results of operations, or financial condition. Any reduction in the amount of revenues that we derive from these customers, without an offsetting increase in new sales to other customers, could have a material adverse effect on our operating results. A significant change in the liquidity or financial position of our customers could also have a material adverse effect on the collectability of our accounts receivable, our liquidity, and our future operating results.

A significant portion of our operating expenses is relatively fixed and planned expenditures are based in part on expectations regarding future revenues.

Accordingly, unexpected revenue shortfalls may decrease our gross margins and could cause significant changes in our operating results from year to year. As a result, in future quarters our operating results could fall below the expectations of securities analysts or investors, in which event our stock price would likely decrease.

If our customers cancel their contracts or terminate or delay their clinical trials, we may lose or delay revenues and our business may be harmed.

Certain of our customer contracts are subject to cancellation by our customers at any time with limited notice. Customers engaged in clinical trials may terminate or delay a clinical trial for various reasons, including the failure of the tested product to satisfy safety or efficacy requirements, unexpected or undesired clinical results, decisions to deemphasize a particular product or forgo a particular clinical trial, decisions to downsize clinical development programs, insufficient patient enrollment or investigator recruitment, and production problems resulting in shortages of required clinical supplies. Any termination or delay in the clinical trials would likely result in a consequential delay or termination in those customers' service contracts. We have experienced terminations and delays of our customer service contracts in the past (although no such past terminations have had a significant impact on our results of operations) and we expect to experience additional terminations and delays in the future. The termination of single-study arrangements could result in decreased revenues and the delay of our customers' clinical trials could result in delayed professional services revenues, which could materially harm our business.

If our security is breached, our business could be disrupted, our operating results could be harmed, and customers could be deterred from using our products and services.

Our business relies on the secure electronic transmission, storage, and hosting of sensitive information, including clinical data, financial information, and other sensitive information relating to our customers, company, and workforce. As a result, we face some risk of a deliberate or unintentional incident involving unauthorized access to our computer systems (including, among other methods, cyber- attacks or social engineering) that could result in misappropriation or loss of assets or sensitive information, data corruption, or other disruption of business operations. In light of this risk, we have devoted significant resources to protecting and maintaining the confidentiality of our information, including implementing security and privacy programs and controls, training our workforce, and implementing new technology. We have no guarantee that these programs and controls will be adequate to prevent all possible security threats. We believe that any compromise of our electronic systems, including the unauthorized access, use, or disclosure of sensitive information or a significant disruption of our computing assets and networks, would adversely affect our reputation and our ability to fulfill contractual obligations, and would require us to devote significant financial and other resources to mitigate such problems, and could increase our future cyber security costs. Moreover, unauthorized access, use, or disclosure of such sensitive information could result in contractual or other liability. In addition, any real or perceived compromise of our security or disclosure of sensitive information may result in lost revenues by deterring customers from using or purchasing our products and services in the future or prompting them to use competing service providers.

Any failure by us to properly protect customer data we possess or are deemed to possess in connection with the conduct of clinical trials, could subject us to significant liability.

Our customers use our solutions to collect, manage, and report information in connection with the conduct of clinical trials. This information may be considered our customers' proprietary information. Since we receive and process our customers' data from customers utilizing our hosted solutions, there is a risk that we could be liable if there were a breach of any obligation to a protected person under contract, standard of practice, or regulatory requirement. If we fail to properly protect our customers' data that is in our possession or deemed to be in our possession, we could be subjected to significant liability and our reputation would be harmed.

We rely upon a single internal hosting facility and Amazon Web Services to deliver our solutions to our customers and any disruption of or interference with our hosting systems, operations, or use of the Amazon Web Services could harm our business and results of operations.

Substantially all of the computer hardware necessary to deliver our CRO and KIWI solutions is located at our internal hosting facility in Buffalo, New York. In addition to our dedicated hosting facility, we utilize third-party cloud computing services from Amazon Web Services ("AWS") to help us efficiently scale our cloud-based solutions and provide training. Because we cannot easily switch our AWS-serviced operations to another cloud provider, any disruption of or interference with our use of AWS would impact our operations, and our business would be adversely impacted. Our systems and operations or those of AWS could suffer damage or interruption from human error, fire, flood, power loss, telecommunications failure, break-ins, terrorist attacks, acts of war, and similar events. The occurrence of a natural disaster, an act of terrorism or other unanticipated problems at our or AWS' hosting facilities could result in lengthy interruptions in our service. Although we and AWS maintain backup facilities and disaster recovery services in the event of a system failure, these may be insufficient or fail. Any system failure, including network, software, or hardware failure, that causes an interruption in our Buffalo data center or our use of AWS or that causes a decrease in responsiveness of our cloud-based solutions could damage our reputation and cause us to lose customers, which could harm our business and results of operations. Our business may be harmed if our customers and potential customers believe our service is unreliable.

Defects or errors in our software applications could harm our reputation, result in significant cost to us and impair our ability to market our solutions.

Our software applications are inherently complex and may contain defects or errors, some of which may be material. Errors may result from our own technology or from the interface of our cloud-based solutions with legacy systems and data, which we did not develop. The risk of errors is particularly significant when a new product is first introduced or when new versions or enhancements of existing products are released. The likelihood of errors is increased when we do more frequent releases of new products and enhancements of existing products. We have, from time to time, found defects in our solutions. Although these past defects have not resulted in any litigation against us to date, we have invested significant capital, technical, managerial, and other resources to investigate and correct these past defects and we have needed to divert these resources from other development efforts. In addition, material performance problems or defects in our solutions may arise in the future. Material defects in our cloud-based solutions could result in a reduction in sales, delay in market acceptance of our solutions, or credits or refunds to our customers. In addition, such defects may lead to the loss of existing customers and difficulty in attracting new customers, diversion of development resources, or harm to our reputation. Correction of defects or errors could prove to be impossible or impractical. The costs incurred in correcting any defects or errors or in responding to resulting claims or liability may be substantial and could adversely affect our operating results.

If we are not able to reliably meet our data storage and management requirements, or if we experience any failure or interruption in the delivery of our services over the Internet, customer satisfaction and our reputation could be harmed and customer contracts may be terminated.

As part of our current business model, we deliver our software over the Internet and store and manage hundreds of terabytes of data for our customers, resulting in substantial information technology infrastructure and ongoing technological challenges, which we expect to continue to increase over time. If we do not reliably meet these data storage and management requirements, or if we experience any failure or interruption in the delivery of our services over the Internet, customer satisfaction and our reputation could be harmed, leading to reduced revenues and increased expenses. Our hosting services are subject to service-level agreements and, in the event that we fail to meet guaranteed service or performance levels, we could be subject to customer credits or termination of these customer contracts. If the cost of meeting these data storage and management requirements increases, our results of operations could be harmed.

Some of our software solutions and services utilize open source software, and any failure to comply with the terms of one or more of these open source licenses could adversely affect our business.

Some of our software solutions utilize software covered by open source licenses. Open source software is typically freely accessible, usable and modifiable, and is used by our development team in an effort to reduce development costs and speed up the development process. Certain open source software licenses require a user who intends to distribute the open source software as a component of the user's software to disclose publicly part or all of the source code to the user's software. In addition, certain open source software licenses require the user of such software to make any derivative works of the open source code available to others on unfavorable terms or at no cost. This can subject previously proprietary software to open source license terms. While we monitor the use of all open source software in our products, processes and technology and try to ensure that no open source software is used in such a way as to require us to disclose or make available the source code to the related product or solution, such use could inadvertently occur. This could harm our intellectual property position and have a material adverse effect on our business.

We may be unable to adequately enforce or defend our ownership and use of our intellectual property and other proprietary rights .

Our success is heavily dependent upon our intellectual property and other proprietary rights. We rely upon a combination of trademark, trade secret, copyright, patent, and unfair competition laws, as well as license and access agreements and other contractual provisions, to protect our intellectual property and other proprietary rights. In addition, we attempt to protect our intellectual property and proprietary information by requiring certain of our employees and consultants to enter into confidentiality, non-competition, and assignment-of-inventions agreements. The steps we take to protect these rights may not be adequate to prevent misappropriation of our technology by third parties, or may not be adequate under the laws of some foreign countries, which may not protect our intellectual property rights to the same extent as do the laws of the United States. Our attempts to protect our intellectual property may be challenged by others or invalidated through administrative process or litigation, and agreement terms that address non-competition are difficult to enforce in many jurisdictions and may not be enforceable in any particular case. In addition, there remains the possibility that others will “reverse engineer” our products in order to introduce competing products, or that others will develop competing technology independently. If we resort to legal proceedings to enforce our intellectual property rights or to determine the validity and scope of the intellectual property or other proprietary rights of others, the proceedings could be burdensome and expensive, even if we were to prevail. The failure to adequately protect our intellectual property and other proprietary rights may have a material adverse effect on our business, results of operations or financial condition.

Current and future litigation against us, which may arise in the ordinary course of our business, could be costly and time consuming to defend.

We are subject to claims that arise in the ordinary course of business, such as claims brought by our customers in connection with commercial disputes and employment claims made by our current or former employees. Third parties may in the future assert intellectual property rights to technologies that are important to our business and demand back royalties or demand that we license their technology. Litigation may result in substantial costs and may divert management's attention and resources, which may seriously harm our business, overall financial condition, and operating results. Insurance may not cover such claims, may not be sufficient for one or more such claims, and may not continue to be available on terms acceptable to us. A claim brought against us that is uninsured or underinsured could result in unanticipated costs, negatively affecting our business, results of operations, and financial condition.

We could incur substantial costs resulting from product liability claims relating to our products or services or our customers' use of our products or services.

Any failure or errors in a customer's clinical trial caused or allegedly caused by our products or services could result in a claim for substantial damages against us by our customers or the clinical trial participants, regardless of our responsibility for the failure. Although we are generally entitled to indemnification under our customer contracts against claims brought against us by third parties arising out of our customers' use of our products, we might find ourselves entangled in lawsuits against us that, even if unsuccessful, may divert our resources and energy and adversely affect our business. Further, in the event we seek indemnification from a customer, a court may not enforce our indemnification right if the customer challenges it or the customer may not be able to fund any amounts for indemnification owed to us. In addition, our existing insurance coverage may not continue to be available on reasonable terms or may not be available in amounts sufficient to cover one or more large claims, or the insurer may disclaim coverage as to any future claim.

Our Buffalo Subsidiary (Cognigen) depends on the clinical trial market, and a downturn in this market could cause our revenues to decrease.

Our Buffalo business depends entirely on the clinical trials conducted or sponsored by pharmaceutical, biotechnology and medical device companies, CROs, and other entities. Our revenues may decline as a result of conditions affecting these industries, including general economic downturns, increased consolidation, decreased competition, or fewer products under development. Other developments that may affect these industries and harm our operating results include product liability claims, changes in government regulation, changes in governmental price controls or third-party reimbursement practices, and changes in medical practices. Disruptions in the world credit and equity markets may also result in a global downturn in spending on research and development and clinical trials and may impact our customers' access to capital and their ability to pay for our solutions. Any decrease in research and development expenditures or in the size, scope, or frequency of clinical trials could materially adversely affect our business, results of operations, or financial condition.

As a public company, we may incur significant administrative workload and expenses in connection with new and changing compliance requirements.

As a public company with common stock listed on The Nasdaq Capital Market, we must comply with various laws, regulations and requirements. New laws and regulations, as well as changes to existing laws and regulations affecting public companies, including the provisions of the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, and rules adopted by the SEC and by The Nasdaq Capital Market, may result in increased general and administrative expenses and a diversion of management's time and attention as we respond to new requirements.

We have been paying quarterly dividends on our common stock, and although there has been a consistent track record of paying these dividends, the Board of Directors may suspend the dividend, and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

Should the Board of Directors suspend the dividend and decide to use those funds to invest more into the business, you may not receive any dividends on your investment in our common stock for the foreseeable future and the success of an investment in shares of our common stock will depend upon any future appreciation in its value. Shares of our common stock may depreciate in value or may not appreciate in value.

The price of our common stock may fluctuate significantly and investors could lose all or part of their investments.

Shares of our common stock were sold in our initial public offering ("IPO") in 1996 at a price of $1.25 per share (on a post-split basis), and our common stock has subsequently traded as high as $41.95 and as low as $0.38 from our IPO through August 31, 2019. However, an active, liquid, and orderly market for our common stock on The Nasdaq Capital Market or otherwise may not be sustained, which could depress the trading price of our common stock. The trading price of our common stock may be subject to wide fluctuations in response to various factors, some of which are beyond our control, including:

- our quarterly or annual earnings or those of other companies in our industry;
- announcements by us or our competitors of significant contracts or acquisitions;
- changes in accounting standards, policies, guidance, interpretations, or principles;
- general economic and stock market conditions, including disruptions in the world credit and equity markets;
- the failure of securities analysts to cover our common stock or changes in financial estimates by analysts;
- future sales of our common stock; and
- the other factors described in these “Risk Factors.”

In recent years, the stock market in general, and the market for technology-related companies in particular, has experienced wide price and volume fluctuations. This volatility has had a significant impact on the market price of securities issued by many companies, including companies in our industry. The price of our common stock could fluctuate based upon factors that have little to do with our performance, and these fluctuations could materially reduce our stock price.

In the past, some companies, including companies in our industry, have had volatile market prices for their securities and have had securities class action suits filed against them. The filing of a lawsuit against us, regardless of the outcome, could have a material adverse effect on our business, financial condition, and results of operations, as it could result in substantial legal costs and a diversion of our management’s attention and resources.

ITEM 1B – UNRESOLVED STAFF COMMENTS

None.

ITEM 2 – PROPERTIES

We lease approximately 13,500 square feet of office space in Lancaster, California. The original lease had a five-year term with two, three-year options to extend. The initial five-year term expired in February 2011, and we extended the lease to February 2, 2014. In June 2013, the lease was amended to extend the term to February 2, 2017. The amended lease also provides for an annual base rent increase of 3% per year and two, two-year options to extend. In May 2016 the Company exercised the two, two-year options extending the term of the lease through February 2, 2021 at a fixed rate of $25,000 per month. The new extension agreement gives the Company the right, upon 90 days’ prior notice, to terminate the lease in the last two years of the term upon payment of a recapture payment equal to the 3% base payment increase that would have been due under the original agreement.

Our Buffalo subsidiary leases approximately 12,623 square feet of space in Buffalo, New York. The initial five-year term expired in October 2018 and was renewed for a three-year option to extending it to October 2021. The new base rent is $16,147 per month.

In September 2017 DILIsym Services, Inc. signed a 3-year lease for approximately 1,900 rentable square feet of space in Research Triangle Park, North Carolina. The initial three-year term expires in October 2020. The base rent is $3,975 per month with an annual 3% adjustment. Prior to this lease DILIsym was on a month-to-month rental.

Rent expense, including common area maintenance fees for the fiscal years ended August 31, 2019, 2018 and 2017 was $584,000, $567,000, and $509,600, respectively.

The Company believes its existing facilities and equipment are in good operating condition and are suitable for the conduct of its business.

ITEM 3 – LEGAL PROCEEDINGS

We are not a party to any legal proceedings and are not aware of pending legal proceedings.

ITEM 4 – MINE SAFETY DISCLOSURES.

Not applicable.

PART II

ITEM 5 – MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The Company's common stock, par value $0.001 per share, trades on the Nasdaq Capital Market under the symbol "SLP."

Price Range of Common Stock

The following table shows high and low sales prices for the Company's common stock for each quarter during the past two fiscal years:

	High	Low
FY18:		
Quarter ended November 30, 2017	$ 17.45	$ 14.25
Quarter ended February 28, 2018	$ 17.05	$ 15.16
Quarter ended May 31, 2018	$ 19.95	$ 14.25
Quarter ended August 31, 2018	$ 23.95	$ 16.70
FY19:		
Quarter ended November 30, 2018	$ 21.25	$ 18.04
Quarter ended February 28, 2019	$ 21.66	$ 17.18
Quarter ended May 31, 2019	$ 27.33	$ 19.74
Quarter ended August 31, 2019	$ 41.95	$ 24.08

Holders

As of November 13, 2019, there were 38 shareholders of record.

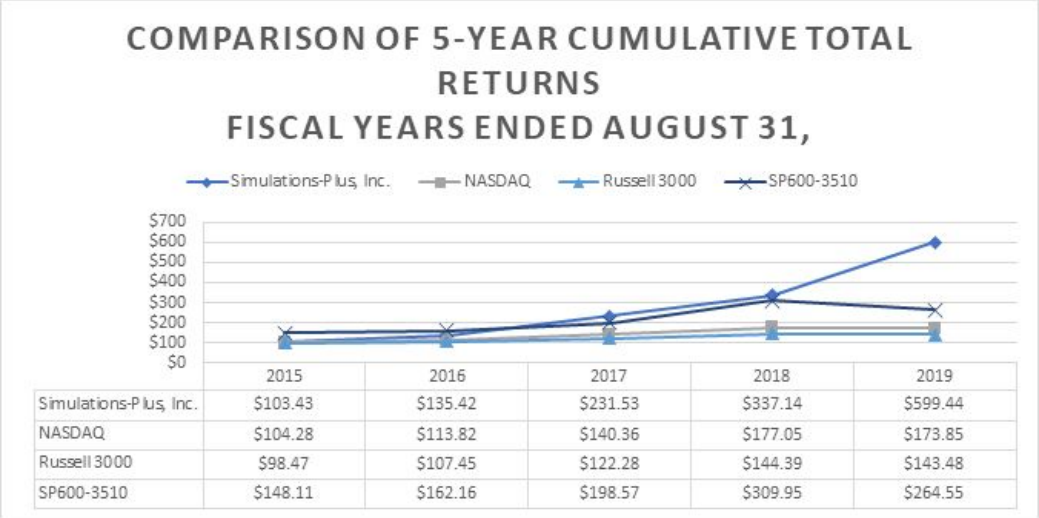
Dividends

We paid a total of approximately $4.2 million in cash dividends during fiscal years 2019, and $4.2 million in fiscal year 2018 as set forth in the table below. We expect to pay quarterly dividends of $0.06 per share of common stock each quarter, subject to declaration by our Board of Directors. However, there can be no assurances that our Board of Directors will continue the dividend distributions for any specified number of quarters.

Fiscal Year	Record Date	Distribution Date	# of Shares Outstanding on Record Date	Dividend per Share	Total Amount
2018	11/13/2017	11/20/2017	17,284,792	$ 0.06	$ 1,037,088
	1/26/2018	2/2/2018	17,317,752	$ 0.06	$ 1,039,065
	4/25/2018	5/02/2018	17,354,005	$ 0.06	$ 1,041,240
	7/26/2018	8/2/2018	17,405,775	$ 0.06	$ 1,044,347
2019	11/01/2018	11/08/2018	17,417,875	$ 0.06	$ 1,045,073
	1/25/2019	2/1/2019	17,481,450	$ 0.06	$ 1,048,887
	4/24/2019	5/01/2019	17,515,228	$ 0.06	$ 1,050,914
	7/25/2019	8/1/2019	17,536,454	$ 0.06	$ 1,052,187

Shareholder Return Performance Presentation

The following graph compares the cumulative total stockholder return on our common stock of a $100 investment from August 31, 2014 through August 31, 2019 assuming reinvestment of dividends, with a similar investment in the Russell 3000 index (the "Russell 3000") and with the companies listed in the Nasdaq Composite - Total Returns ("IXIC"), and the S&P600 Health Care Equipment & Services Industry Group Index (SP600-3510). The historical information set forth below is not necessarily indicative of future performance. This performance graph shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended or incorporated by reference into any of our filings under the Securities Act of 1933, as amended, of the Exchange Act, except as shall be expressly set forth by specific reference in such filing.



	2015	2016	2017	2018	2019
Simulations-Plus, Inc.	$103.43	$135.42	$231.53	$337.14	$599.44
NASDAQ	$104.28	$113.82	$140.36	$177.05	$173.85
Russell 3000	$98.47	$107.45	$122.28	$144.39	$143.48
SP600-3510	$148.11	$162.16	$198.57	$309.95	$264.55

Equity Compensation Plan Information

The following information is provided as of August 31, 2019:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	1,163,259	$ 12.63	666,069
Equity compensation plans not approved by security holders	-0-	-0-	-0-
Total	1,163,259	$ 12.63	666,069

Repurchases

There is currently no share repurchase program pending, and the Company has made no repurchases of its securities since fiscal year 2011.

ITEM 6 – SELECTED FINANCIAL DATA

The following tables set forth the selected consolidated financial data for each of the fiscal years in the five-year period ended August 31, 2019. We derived the selected consolidated financial data from our audited consolidated financial statements, which should be read in conjunction with Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations in Part II of this Annual Report on Form 10-K and our consolidated financial statements and the related notes included elsewhere in this report.

	Year ended August 31,				
Statements of operations data	**2019**	**2018[c]**	**2017[a]**	**2016**	**2015[b]**
Net Revenues	$ 33,970,440	$ 29,666,524	$ 24,137,913	$ 19,972,079	$ 18,314,248
Cost of revenues	9,025,704	7,994,228	6,307,800	4,601,513	4,392,477
Gross margin	24,944,736	21,672,296	17,830,113	15,370,566	13,921,771
SG&A expenses	11,796,027	9,583,852	8,198,184	6,693,691	6,736,767
R&D	2,499,980	1,790,656	1,367,645	1,445,069	1,328,476
Total operating expenses	14,296,007	11,374,508	9,565,829	8,138,760	8,065,243
Income from operations	10,648,729	10,297,788	8,264,284	7,231,806	5,856,528
Other income (expense)	(92,253)	(158,846)	(24,017)	4,586	(163,599)
Income from operations before income taxes	10,556,476	10,138,942	8,240,267	7,236,392	5,692,929
Provision for income taxes	(1,973,147)	(1,204,130)	(2,452,670)	(2,286,256)	(1,849,968)
Net Income	$ 8,583,329	$ 8,934,812	$ 5,787,597	$ 4,950,136	$ 3,842,961
Earnings per share					
Basic	$ 0.49	$ 0.52	$ 0.34	$ 0.29	$ 0.23
Diluted	$ 0.48	$ 0.50	$ 0.33	$ 0.29	$ 0.23
Weighted-average common shares outstanding					
Basic	17,492,258	17,328,707	17,239,490	17,028,566	16,864,670
Diluted	18,057,431	17,860,392	17,515,917	17,209,506	17,032,158
Dividend per common share	$ 0.24	$ 0.24	$ 0.20	$ 0.20	$ 0.20
Dividends	$ 4,197,055	$ 4,161,740	$ 3,448,489	$ 3,413,274	$ 3,375,566

	As of August 31,				
Balance sheet data at year end	**2019**	**2018**	**2017**	**2016**	**2015**
Cash and cash equivalents	11,435,499	9,400,701	6,215,718	8,030,284	8,551,275
Net working capital	16,381,665	12,996,901	10,625,437	10,574,712	7,708,494
Total assets	45,196,697	43,279,016	38,512,468	27,814,317	27,133,254
Total liabilities associated with business and intangible acquisitions	1,761,028	5,890,940	5,985,516	1,000,000	3,604,404
Total liabilities	7,515,093	11,356,391	12,707,581	5,081,723	7,601,052
Total shareholders' equity	37,681,604	31,922,625	25,804,887	22,732,594	19,532,202

Notes to Five-Year Summary

[a] Effective June 1, 2017, we acquired DILIsym Services, Inc. and incurred approximately $620,000 of acquisition related costs in FY2017.

[b] Effective September 2, 2014 we acquired Cognigen Corporation and incurred approximately $410,000 in FY 2015.

[c] In FY2018 we posted a $1.5 million deferred tax benefit due to the effect of new tax rates enacted under the Tax Cuts and Jobs Act of 2017.

ITEM 7 – MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with the Financial Statements and related notes included in this Annual Report on Form 10-K.

Management Overview

Fiscal year 2019 highlights:

- We released ADMET Predictor versions 9.5
- We released GastroPlus version 9.7
- We released DDDPlus® version 6.0 and PKPlus® version 2.5
- We released DILIsym® version 8A
- We released NAFLD® version 2A
- We began development of IPFsym® for pulmonary fibrosis and RADAsym® for radiation
  Phase 2 of RENAsym grant approved for $1.5 million
- We signed a new research collaboration agreement with the FDA Center for Veterinary Medicine, to apply GastroPlus® to assess virtual bioequivalence in canines
- We released Version 4 of its KIWI™ Pharmacometric Communication and Collaboration Platform
- Continued quarterly payment of dividend of 6 cents per share

Fiscal Year 2019 Financial Summary:

- Consolidated net revenues increased by $4.30 million, or 14.5%, to $34 million in fiscal year 2019 from $29.7 million in fiscal year 2018.
- Consolidated gross margin increased $3.27 million or 15.1%, to $24.9 million in fiscal year 2019 from $21.7 million in fiscal year 2018.
- Net income from operations increased $351,000, or 3.4%, to $10.6 million in fiscal year 2019 from $10.3 million in fiscal year 2018.
- Net income decreased by $351,000, or 4%, to $8.58 million in fiscal year 2019 from $8.93 million in fiscal year 2018. In 2018 the company had posted a $1.5 million tax benefit due to the effect of new tax rates enacted under the Tax Cuts and Jobs Act of 2017.
- Diluted earnings share decreased by $0.02 or 4% to $0.48 in 2019 from $0.50 in 2018.

Strategy Going Forward:

- Continue to pursue funded and unfunded collaborations in support of improving our products and services
- Continue to seek accretive acquisitions that complement our existing offerings and expand our markets
- Continue our aggressive marketing and sales campaign, including numerous scientific conferences and meetings
- Continue to expand our use of social media and advertising
- Continue to expand our sales staff, both in-house and in the field
- Continue to recruit scientific and other resources to support our product and scientific consulting services
- Expand our publishing activities in scientific journals

Fiscal year 2019 was yet another record year. We believe the continued growth of our pharmaceutical software and services business is the result of steadily increasing adoption of simulation and modeling software tools across the pharmaceutical industry, the push by regulatory agencies for increased use of modeling and simulation, and the expertise we offer as consultants to assist companies involved in the research and development of new medicines. We have received a continuing series of study contracts with pharmaceutical companies ranging from several of the largest in the world to a number of medium-sized and smaller companies in the U.S., Europe, and Japan.

Our financial performance has enabled us to maintain significant cash deposits, continue our research and development activities, and invest in staffing to meet the needs of a wider customer base, as well as to distribute significant cash dividends to our shareholders.

We do not have any stock repurchase programs currently in place or pending; however, our Board of Directors may consider such programs from time to time.

Results of Operations

FY19 COMPARED WITH FY18

The following sets forth selected items from our statements of operations (in thousands) and the percentages that such items bear to net sales for the fiscal years ended August 31, 2019 (FY19) and August 31, 2018 (FY18) (Because of rounding, numbers may not foot.)

	Fiscal year ended			
	8/31/19		**8/31/18**	
Net revenues	$ 33,970	100.00%	$ 29,667	100.00%
Cost of revenues	9,025	26.6	7,994	26.9
Gross margin	24,945	73.4	21,672	73.1
Selling, general and administrative	11,796	34.6	9,584	32.3
Research and development	2,500	7.4	1,791	6.0
Total operating expenses	14,296	41.9	11,375	38.3
Income from operations	10,649	31.5	10,298	34.7
Other income (expense)	(92)	(0.3)	(159)	(0.5)
Net income before taxes	10,556	31.2	10,139	34.2
(Provision) for income taxes	(1,973)	(5.8)	(1,204)	(4.1)
Net income	$ 8,583	25.4%	$8, 935	30.1%

Net Revenues

Consolidated net revenues increased by 14.5% or $4.3 million to $33.97 million in FY19 from 29.67 million in FY18. Our Lancaster, California division increased revenues by $2.03 million or 11.6%, to $19.6 million in FY19 from $17.6 million in FY18. $1.46 million of this increase was from revenues generated by our Buffalo subsidiary (Cognigen), an increase of 18.6%. DILIsym Services, Inc. (DILIsym) increased revenues by $807,000 or 19%. FY19 software and software related revenues increased $1.8 million or 11.0% while consulting revenues increased by $2.5 million or 19.0% compared to FY18.

Cost of Revenues

Consolidated cost of revenues increased by $1.03 million or 12.9% to $9.0 million in FY19 from $8.0 million in FY18. Labor-related cost incurred by our Lancaster and Buffalo divisions increased by $190,000 and $1.25 million, respectively mainly in support of increased consulting revenues. This was offset by a $380,000 decrease in cost of revenues for direct contract expenses paid for testing at DILIsym. We saw a decrease of approximately $52,000 in training related expenses in FY2019.

A significant portion of cost of revenues for pharmaceutical software products is the systematic amortization of capitalized software development costs, which is an independent fixed cost rather than a variable cost related to revenues. This amortization cost of $1.33 million in FY19 increased by approximately $31,000 in FY19.

Cost of revenues as a percentage of revenue remained fairly consistent at 26.6% in FY19 as compared to 26.9% in FY18, a decrease of 0.3% year over year.

Gross Margin

Consolidated gross margin increased $3.27 million or 15.1%, to $24.94 million in FY19 from $21.67 million in FY18. $1.8 million of this increase is from the California division, which showed an 83.3% gross margin. The Buffalo Division gross margins increased $325,000 or 7% with margins of 53.2%. DILIsym of North Carolina recorded a $1.14 million increase, a 72.7% margin, versus a 59.6% margin in FY18.

Overall gross margin has remained fairly consistent at 73.4% in FY19 as compared to 73.1% in FY18 an increase of 0.3% year over year.

Selling, General and Administrative Expenses
Selling, general, and administrative (SG&A) expenses increased $2.22 million, or 23.1% to $11.80 million in FY19 from $9.58 million in FY18. As a percent of revenues, SG&A was 34.6% for FY19, compared to 32.3% in FY18 and 33.9% in FY17.

The major increases in SG&A expense were:

- Commission expenses were up $122,000, mainly related to increased sales through representatives in Asia
- Accounting and audit fees increased by $73,000 associated with costs of consolidated audits and other compliance-related expenses
- Contract labor increased $172,000 due to increased director fees and consulting related to various corporate initiatives
- G&A salaries and wages increased by $939,000; this increase is a combination of increased headcount and salaries in support of corporate growth
- Insurance expense increased $218,000; $174,000 was health-related medical costs from increased headcount and rate increases
- Payroll tax expense increased $116,000, the effect of higher salary expense
- 401k expense increased $78,000 due to the increased staffing
- Recruiting and hiring costs increased $214,000 mainly due to recruiting fees of scientific personnel
- Software licenses costs increased $87,000 mainly due to sales volume related license fee increases

The major decreases in SG&A expense were:

- Trade show related costs decreased by $52,000 mainly due to lower attendance costs

Research and Development
We incurred approximately $4,299,000 of research and development costs during FY19. Of this amount, $1,768,000 was capitalized and $2,500,000 was expensed. We incurred approximately $3,936,000 of research and development costs during FY18. Of this amount, $2,145,000 was capitalized and $1,791,000 was expensed. The increase of $363,000, or 9.2%, in total research and development expenditures from FY18 to FY19 was mainly from $278,000 of costs incurred by DILIsym Services Inc.

Provision for Income Taxes
The provision for income taxes was $1.97 million for FY19 compared to $1.20 million for FY18. Our effective tax rate increased to 18.7% in FY19 from 11.9% in FY18.

This increase results mainly from a second quarter 2018 assessment of deferred taxes based on the new tax rates enacted under the Tax Cuts and Jobs Act of 2017 (the “2017 Tax Act”). Financial Accounting Standards Board (“FASB”) Accounting Standards Codification Topic 740, Income Taxes (“ASC 740”) requires that the company recognize the effects of changes in tax laws or tax rates in the financial statements for the period in which such changes were enacted. Among other things, changes in tax laws or tax rates can affect the amount of taxes payable for the current period, as well as the amount and timing of deferred tax liabilities and deferred tax assets. Based on the assessment the Company posted a one-time tax benefit in the amount of $1,500,000 in the second fiscal quarter of 2018, the result of estimating future deferred liabilities at the lower tax rates under the newly enacted tax laws.

The effective rate differs from statutory rates of approximately 25.4% due to R&D credits and the tax effect of disqualifying dispositions. In the last part of FY19, as a result of increase in stock prices, a number of employees exercised and sold incentive stock options granted to them under their corporate incentive plans, creating corporate tax deductions that lowered the effective rate.

Net Income
Net income decreased by $351,000 or 3.9%, to $8.6 million in FY19 from $8.93 million in FY18. The decrease in income was substantially effected by the deferred tax benefit of $1.5 million discussed above in the note on Provision for Income Taxes, which reduced taxes in FY18.

FY18 COMPARED WITH FY17

The following sets forth selected items from our statements of operations (in thousands) and the percentages that such items bear to net sales for the fiscal years ended August 31, 2018 (FY18) and August 31, 2017 (FY17) (Because of rounding, numbers may not foot.)

	Fiscal years ended			
	8/31/18		8/31/17	
Net revenues	$ 29,667	100.00%	$ 24,138	100.0%
Cost of revenues	7,994	26.9	6,308	26.1
Gross margin	21,672	73.1	17,830	73.9
Selling, general and administrative	9,584	32.3	8,198	34.0
Research and development	1,791	6.0	1,368	5.6
Total operating expenses	11,375	38.3	9,566	39.6
Income from operations	10,298	34.7	8,264	34.2
Other income	(159)	(0.5)	(24)	(0.1)
Net income before taxes	10,139	34.2	8,240	34.1
(Provision) for income taxes	(1,204)	(4.1)	(2,253)	(10.1)
Net income	$ 8,935	30.1%	$ 5,788	24.0%

Net Revenues

Consolidated net revenues increased by 22.9% or $5.53 million to $29.67 million in FY18 from $24.14 million in FY17. Our Lancaster, California division increased $1.95 million or 12.5%, to $17.6 million in FY18 from $15.6 million in FY17. $557,000 of this increase was from revenues generated by our Buffalo subsidiary (Cognigen), an increase of 7.6%. DILIsym Services, Inc. (DILIsym), recorded revenues of $4.3 million; in FY17 revenues were $1.2 million for the period of June 1, 2017 thru the end of fiscal year August 31, 2017. FY18 software license sales increased $1.03 million while consulting revenues increased by $4.49 million compared to FY17; $3.2 million of the consulting increase was revenues of DILIsym Services Inc.

Cost of Revenues

Consolidated cost of revenues increased by $1.69 million or 26.7% to $8.0 million in FY18 from $6.31 million in FY17. Labor-related cost accounted for $922,000 of this increase, a combination of increased labor count, salary increases, and bonuses at our subsidiaries based on increased earnings. Included in the increase was $505,000 of salary expense at DILIsym. Other significant increases in cost of revenues included $393,000 of increase direct contract expenses paid for testing at DILIsym. We saw a decrease of approximately $65,000 in training related expenses in FY2018.

A significant portion of cost of revenues for pharmaceutical software products is the systematic amortization of capitalized software development costs, which is an independent fixed cost rather than a variable cost related to revenues. This amortization cost increased approximately $203,000 in FY18 compared with FY17. In addition, in 2018 there was an additional $238,000 of amortization expense associated with acquired technologies associated with DILIsym's drug-induced liver injury technologies.

Cost of revenues as a percentage of revenue increased to 26.9% in FY18 from 26.1% in FY17. The majority of this percentage change is a result of the increased salary costs associated with consulting costs and the blend of software sales compared to consulting services during FY18.

Gross Margin

Consolidated gross margin increased $3.84 million or 21.5%, to $21.67 million in FY18 from $17.83 million in FY17. $1.5 million of this increase is from the California division, which showed an 82.6% gross margin. The Buffalo Division gross margins increased $437,000 or 10.4% with margins of 58.9%. DILIsym of North Carolina showed $2.54 million, a 59.6% margin vs a 55.2% margin in FY17 which represented only one quarters worth of activities.

Overall gross margin decreased to 73.1% in FY18 from 73.9% in FY17 due to increased salary costs associated with the relatively higher revenue mix of consulting to software in FY17.

Selling, General and Administrative Expenses

Selling, general, and administrative (SG&A) expenses increased $1.39 million, or 16.9% to $9.58 million in FY18 from $8.19 million in FY17. As a percent of revenues, SG&A was 32.31% for FY18, compared to 33.96% in FY17 and 33.52% in FY16.

The major increases in SG&A expense were:

- Commission expenses were up $175,000, mainly related to increased sales through representatives in Asia
- Accounting and audit fees increased by $40,000 associated with costs of consolidated audits and other compliance-related expenses
- Contract labor increased $187,000 mainly due to increase director fees
- G&A Salaries and Wages increased by $621,000; this increase is a combination of increased salaries of $255,000 at DILIsym, annual salary increases and increased in head count.
- Insurance Expense increased $247,000; $234,000 was health-related medical costs of which $98,000 was associated with DILIsym.
- Payroll tax expense increased $204,000, the effect of higher salary expense of which $98,000 was DILIsym
- 401k expense increased $75,000 due to the increased staffing and full year of employees at DILIsym
- Trade shows, and travel expense increased $125,000
- Rent increase $57,000 due mainly to the addition of DILIsym in June 2017
- Amortization expense increased $158,000 due to increase acquisition amortization for DILIsym intangibles

The major decreases in SG&A expense were:

- G&A expenses categories for consulting, legal, and accounting decrease by a total of $620,000 in FY18 as in FY17 there were one-time charges associated with the acquisition of DILIsym Services.

Research and Development

We incurred approximately $3,936,000 of research and development costs during FY18. Of this amount, $2,145,000 was capitalized and $1,791,000 was expensed. We incurred approximately $2,743,000 of research and development costs during FY17. Of this amount, $1,376,000 was capitalized and $1,367,000 was expensed. The increase of $1,193,000, or 43.5%, in total research and development expenditures from FY17 to FY18 was mainly from $504,000 of costs incurred by DILIsym Services Inc.

Provision for Income Taxes

The provision for income taxes was $1.20 million for FY18 compared to $2.45 million for FY17. Our effective tax rate decreased to 11.9% in FY18 from 29.8% in FY17. This decrease results mainly from a second quarter 2018 assessment of deferred taxes based on the new tax rates enacted under the Tax Cuts and Jobs Act of 2017 (the “2017 Tax Act). Financial Accounting Standards Board (“FASB”) Accounting Standards Codification Topic 740, Income Taxes (“ASC 740”) requires that the company recognize the effects of changes in tax laws or tax rates in the financial statements for the period in which such changes were enacted. Among other things, changes in tax laws or tax rates can affect the amount of taxes payable for the current period, as well as the amount and timing of deferred tax liabilities and deferred tax assets. Based on the assessment the Company posted a one-time tax benefit in the amount of $1,500,000 in the second fiscal quarter of 2018, the result of estimating future deferred liabilities at the lower tax rates under the newly enacted tax laws.

Net Income

Net income increased by $3.15 million or 54.4%, to $8.93 million in FY18 from $5.79 million in FY17. Of note, this increase includes a one-time deferred tax benefit of $1.5 million as discuss above in the note on Provision for Income Taxes, and a full year’s net income for DILIsym Services, Inc.

SEASONALITY

Our sales exhibit some seasonal fluctuations, with the fourth fiscal quarter (June-August) generally having the lowest sales due to summer vacations and reduced activities at our customers’ sites. In 2017, revenues in the fourth quarter revenues were higher increased due to the acquisition of DILIsym along with increased revenues at our Buffalo Division. Our subsidiaries DILIsym and Cognigen Corporations revenue mix is a higher blend of consulting revenues, as such the seasonality of total revenues has tended to flatten in the last couple years. This unaudited quarterly sales information has been prepared on the same basis as the annual information presented elsewhere in this Annual Report on Form 10-K and, in the opinion of management, reflects all adjustments (consisting of normal recurring entries) necessary for a fair presentation of the information presented. Net sales for any quarter are not necessarily indicative of sales for any future period; however, because our pharmaceutical software is licensed on an annual basis, renewals are usually within the same quarter year after year. (Numbers may not foot because of rounding.)

Net Sales (in thousands of dollars)

FY	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2019	$ 7,536	8,472	9,937	8,026	$ 33,971
2018	$ 7,069	7,357	8,553	6,688	$ 29,667
2017	$ 5,418	5,706	6,748	6,265	$ 24,138
2016	$ 4,839	5,164	6,011	3,958	$ 19,972
2015	$ 4,086	4,574	5,942	3,712	$ 18,314
2014	$ 2,641	3,081	3,741	1,998	$ 11,461
2013	$ 2,290	3,118	3,095	1,568	$ 10,071
2012	$ 2,248	2,789	2,772	1,640	$ 9,449
2011	$ 2,050	2,622	2,640	1,427	$ 8,739
2010	$ 1,735	2,227	2,325	1,334	$ 7,621

LIQUIDITY AND CAPITAL RESOURCES

Our principal source of capital has been cash flow from our operations. We have achieved continuous positive operating cash flow over the last twelve fiscal years. We believe that our existing capital and anticipated funds from operations will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for the foreseeable future. Thereafter, if cash generated from operations is insufficient to satisfy our capital requirements, we may open a revolving line of credit with a bank, or we may have to sell additional equity or debt securities or obtain credit facilities. In the event such financing is needed in the future, there can be no assurance that such financing will be available to us, or, if available, that it will be in amounts and on terms acceptable to us. If cash flows from operations became insufficient to continue operations at the current level, and if no additional financing was obtained, then management would restructure the Company in a way to preserve its pharmaceutical business while maintaining expenses within operating cash flows.

We are not aware of any trends or demands, commitments, events or uncertainties that are reasonably likely to result in a decrease in liquidity of our assets. The trend over the last ten years has been increasing cash deposits from our operating cash flows, and we expect that trend to continue for the foreseeable future.

On May 1, 2017 we signed a stock acquisition agreement with DILIsym Services, Inc. of Research Triangle Circle, North Carolina, and on June 1, 2017 consummated the acquisition of all the outstanding capital stock of DILIsym Services, Inc. pursuant to a Stock Purchase Agreement. DILIsym became a wholly-owned subsidiary of Simulations Plus. Under the terms of the Agreement, the Company: (1) paid to the DILIsym Shareholders Five Million Dollars, $4,515,982 payable at the closing of the Acquisition subject to certain adjustments and holdbacks and will pay to the DILIsym Shareholders certain earn-out payments, to be measured by the earnings of DILIsym before income taxes, payable following the Closing, as more particularly described in the Agreement and as more fully described in Note 13.

We will continue to seek opportunities for strategic acquisitions. If one or more such acquisitions is identified, a substantial portion of our cash reserves may be required to complete it; however, we intend to maintain sufficient cash reserves after any acquisition to provide reasonable assurance that outside financing will not be necessary to continue operations. If we identify an attractive acquisition that would require more cash to complete than we are willing or able to use from our cash reserves, we will consider financing options to complete the acquisition, including obtaining loans and issuing additional securities.

Quarterly dividend payments made in FY18 and FY19 are listed in the following table.

Fiscal Year	Record Date	Distribution Date	# of Shares Outstanding on Record Date	Dividend per Share	Total Amount
2018	11/13/2017	11/20/2017	17,284,792	$ 0.06	$ 1,037,088
	1/26/2018	2/2/2018	17,317,752	$ 0.06	$ 1,039,065
	4/25/2018	5/02/2018	17,354,005	$ 0.06	$ 1,041,240
	7/26/2018	8/2/2018	17,405,775	$ 0.06	$ 1,044,347
2019	11/01/2018	11/08/2018	17,417,875	$ 0.06	$ 1,045,073
	1/25/2019	2/1/2019	17,481,450	$ 0.06	$ 1,048,887
	4/24/2019	5/01/2019	17,515,228	$ 0.06	$ 1,050,914
	7/25/2019	8/1/2019	17,536,454	$ 0.06	$ 1,052,187

The Board of directors has indicated its intention to pay $0.06 quarterly dividends; however, there can be no assurances that our Board of Directors will continue the dividend distributions as the decision is made on a quarterly basis based on current financial conditions and strategic plans. In November 2019, our Board of Directors declared and paid a dividend distribution of $0.06 per share.

KNOWN TRENDS OR UNCERTAINTIES

Although we have not seen any significant reduction in revenues to date, we have seen some consolidation in the pharmaceutical industry during economic downturns. These consolidations have not had a negative effect on our total sales to that industry; however, should consolidations and downsizing in the industry continue to occur, those events could adversely impact our revenues and earnings going forward.

We believe that the need for improved productivity in the research and development activities directed toward developing new medicines will continue to result in increasing adoption of simulation and modeling tools such as those we produce. New product developments in the pharmaceutical business segments could result in increased revenues and earnings if they are accepted by our markets; however, there can be no assurances that new products will result in significant improvements to revenues or earnings. For competitive reasons, we do not disclose all of our new product development activities.

Our continued quest for acquisitions could result in a significant change to revenues and earnings if one or more such acquisitions are completed.

The potential for growth in new markets (e.g., healthcare) is uncertain. We will continue to explore these opportunities until such time as we either generate sales or determine that resources would be more efficiently used elsewhere.

INFLATION

We have not been affected materially by inflation during the periods presented, and no material effect is expected in the near future.

OFF-BALANCE SHEET ARRANGEMENTS

As of August 31, 2019, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As such, we are not materially exposed to any financing, liquidity, market, or credit risk that could arise if we had engaged in such relationships.

We do not have relationships or transactions with persons or entities that derive benefits from their non-independent relationship with us or our related parties.

CONTRACTUAL OBLIGATIONS

The following table provides aggregate information regarding our contractual obligations as of August 31, 2019 (in thousands).

	Payments due by period				
Contractual obligations:	**Total**	**Less than 1 year**	**1–3 years**	**3–5 years**	**More than 5 years**
Operating lease obligations	$ 942	$ 565	$ 376	$ –	$ –
Contracts Payable	1,761	1,761	–	–	–
Total	$ 2,703	$ 2,326	$ 376	$ –	$ –

RECENTLY ISSUED OR NEWLY ADOPTED ACCOUNTING STANDARDS

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09). The standard will eliminate the transaction- and industry-specific revenue recognition guidance under current generally accepted accounting principles in the U.S. (GAAP) and replace it with a principles-based approach for determining revenue recognition. ASU 2014-09 is effective for annual and interim periods beginning after December 15, 2017. Early adoption is permitted for years beginning after December 15, 2016. The revenue recognition standard is required to be applied retrospectively, including any combination of practical expedients as allowed in the standard. The standard was adopted concurrently with the adoption of ASU 2016-10 which is effective for annual and interim periods beginning after December 15, 2017.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which supersedes existing guidance on accounting for leases in "Leases (Topic 840)" and generally requires all leases to be recognized in the consolidated balance sheet. ASU 2016-02 is effective for annual and interim reporting periods beginning after December 15, 2018; early adoption is permitted. The provisions of ASU 2016-02 are to be applied using a modified retrospective approach. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements.

In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers (Topic 606), which amends certain aspects of the Board's new revenue standard, ASU 2014-09, Revenue from Contracts with Customers. The standard was adopted concurrently with the adoption of ASU 2014-09 which is effective for annual and interim periods beginning after December 15, 2017.

SIGNIFICANT ACCOUNTING POLICIES

Estimates

Our financial statements and accompanying notes are prepared in accordance with GAAP. Preparing financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses. These estimates and assumptions are affected by management’s application of accounting policies. Actual results could differ from those estimates. Significant accounting policies for us include revenue recognition, accounting for capitalized software development costs, valuation of stock options, and accounting for income taxes.

Revenue Recognition

The Company adopted Topic 606 effective September 1, 2018 using the modified retrospective method applying this guidance to all open contracts at the date of initial application, which resulted in an adjustment to retained earnings for the cumulative effect of applying this guidance. The most significant impact of Topic 606 on revenue to the Company relates to the timing of revenue recognition for one of its payment contracts. Under 606 the revenues under the contract are being recognized as time is expended and costs are being expensed as incurred. Under ASC 605 revenues were recognized as invoiced and certain costs were capitalized as development.

We generate revenue primarily from the sale of software licenses and providing consulting services to the pharmaceutical industry for drug development.
The Company determines revenue recognition through the following steps:

i. Identification of the contract, or contracts, with a customer

ii. Identification of the performance obligations in the contract

iii. Determination of the transaction price

iv. Allocation of the transaction price to the performance obligations in the contract

v. Recognition of revenue when, or as, the Company satisfies a performance obligation

The Company accounts for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Contracts generally have fixed pricing terms and are not subject to variable pricing. The Company considers the nature and significance of each specific performance obligation under a contract when allocating the proceeds under each contract. Accounting for contracts includes significant judgement in the estimation of estimated hours/cost to be incurred on consulting contracts, and the *di minimis* nature of the post sales costs associated with software sales.

Cash and Cash Equivalents

For purposes of the statements of cash flows, we consider all highly liquid investments purchased with original maturities of three months or less to be cash equivalents.

Accounts Receivable

We analyze the age of customer balances, historical bad-debt experience, customer creditworthiness, and changes in customer payment terms when making estimates of the collectability of the Company's trade accounts receivable balances. If we determine that the financial conditions of any of our customers deteriorated, whether due to customer-specific or general economic issues, an increase in the allowance may be made. Accounts receivable are written off when all collection attempts have failed.

Capitalized Computer Software Development Costs

Software development costs are capitalized in accordance with FASB ASC 985-20, "Costs of Software to Be Sold Leased, or Marketed". Capitalization of software development costs begins upon the establishment of technological feasibility and is discontinued when the product is available for sale.

The establishment of technological feasibility and the ongoing assessment for recoverability of capitalized software development costs require considerable judgment by management with respect to certain external factors including, but not limited to, technological feasibility, anticipated future gross revenues, estimated economic life, and changes in software and hardware technologies. Capitalized computer software development costs are comprised primarily of salaries and direct payroll-related costs and the purchase or licensing of existing software to be used in the Company's software products.

Amortization of capitalized computer software development costs is calculated on a product-by-product basis on the straight-line method over the estimated economic life of the products not to exceed five years. Amortization of software development costs amounted to $1,331,753, $1,300,434 and $1,096,967 for FY19, FY18 and FY17, respectively. We expect future amortization expense to vary due to increases in capitalized computer software development costs.

We test capitalized computer software development costs for recoverability whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

Property and Equipment

Property and equipment are recorded at cost, less accumulated depreciation and amortization. Depreciation and amortization are provided using the straight-line method over the estimated useful lives as follows:

Equipment	5 years
Computer equipment	3 to 7 years
Furniture and fixtures	5 to 7 years
Leasehold improvements	Shorter of life of asset or lease

Maintenance and minor replacements are charged to expense as incurred. Gains and losses on disposals are included in the results of operations.

Intangible Assets and Goodwill

The Company performs valuations of assets acquired and liabilities assumed on each acquisition accounted for as a business combination and recognizes the assets acquired and liabilities assumed at their acquisition date fair value. Acquired intangible assets include customer relationships, software, trade name, and non-compete agreements. The Company determines the appropriate useful life by performing an analysis of expected cash flows based on historical experience of the acquired businesses. Intangible assets are amortized over their estimated useful lives using the straight-line method, which approximates the pattern in which the majority of the economic benefits are expected to be consumed.

Goodwill represents the excess of the cost of an acquired entity over the fair value of the acquired net assets. Goodwill is not amortized, instead it is tested for impairment annually or when events or circumstances change that would indicate that goodwill might be impaired. Events or circumstances that could trigger an impairment review include, but are not limited to, a significant adverse change in legal factors or in the business climate, an adverse action or assessment by a regulator, unanticipated competition, a loss of key personnel, significant changes in the manner of the Company's use of the acquired assets or the strategy for the Company's overall business, significant negative industry or economic trends or significant under-performance relative to expected historical or projected future results of operations.

Goodwill is tested for impairment at the reporting unit level, which is one level below or the same as an operating segment. As of August 31, 2019, the Company determined that it has three reporting units, Simulations Plus, Cognigen Corporation and DILIsym Services, Inc. When testing goodwill for impairment, the Company first performs a qualitative assessment to determine whether it is necessary to perform step one of a two-step annual goodwill impairment test for each reporting unit. The Company is required to perform step one only if it concludes that it is more likely than not that a reporting unit's fair value is less than its carrying value. Should this be the case, the first step of the two-step process is to identify whether a potential impairment exists by comparing the estimated fair values of the Company's reporting units with their respective book values, including goodwill. If the estimated fair value of the reporting unit exceeds book value, goodwill is considered not to be impaired, and no additional steps are necessary. If, however, the fair value of the reporting unit is less than book value, then the second step is performed to determine if goodwill is impaired and to measure the amount of impairment loss, if any. The amount of the impairment loss is the excess of the carrying amount of the goodwill over its implied fair value. The estimate of implied fair value of goodwill is primarily based on an estimate of the discounted cash flows expected to result from that reporting unit, but may require valuations of certain internally generated and unrecognized intangible assets such as the Company's software, technology, patents and trademarks. If the carrying amount of goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to the excess.

As of August 31, 2019, the entire balance of goodwill was attributed to two of the Company's reporting units Cognigen and DILIsym. Intangible assets subject to amortization are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable. There were no changes to goodwill, nor has the Company recognized any impairment charges during FY19, FY18 and FY17.

Reconciliation of Goodwill for FY19, FY18 and FY17:

	Cognigen	DILIsym	Total
Balance, August 31, 2016	**4,789,248**	–	**4,789,248**
Addition	–	5,597,950	5,597,950
Impairments	–	–	–
Balance, August 31, 2017	**4,789,248**	**5,597,950**	**10,387,198**
Addition	–	–	–
Impairments	–	–	–
Balance, August 31, 2018	**4,789,248**	**5,597,950**	**10,387,198**
Addition	–	–	–
Impairments	–	–	–
Balance, August 31, 2019	**$ 4,789,248**	**$ 5,597,950**	**$ 10,387,198**

Other Intangible Assets

The following table summarizes other intangible assets as of August 31, 2019:

	Amortization Period	Acquisition Value	Accumulated Amortization	Net book value
Customer relationships-Cognigen	Straight line 8 years	$ 1,100,000	$ 687,500	$ 412,500
Trade Name-Cognigen	None	500,000	0	500,000
Covenants not to compete-Cognigen	Straight line 5 years	50,000	50,000	0
Covenants not to compete-DILIsym	Straight line 4 years	80,000	45,000	35,000
Trade Name-DILIsym	None	860,000	0	860,000
Customer relationships-DILIsym	Straight line 8 years	1,900,000	427,500	1,472,500
		$ 4,490,000	**$ 1,210,000**	**$ 3,280,000**

Amortization expense for FY19, FY18, and FY17 was $357,500, $357,500, and $200,000, respectively.

Business Acquisitions

The Company accounted for the acquisition of Cognigen and DILIsym Services Inc. using the purchase method of accounting where the assets acquired and liabilities assumed are recognized based on their respective estimated fair values. The excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Determining the fair value of certain acquired assets and liabilities is subjective in nature and often involves the use of significant estimates and assumptions, including, but not limited to, the selection of appropriate valuation methodology, projected revenue, expenses and cash flows, weighted average cost of capital, discount rates, estimates of advertiser and publisher turnover rates and estimates of terminal values. Business acquisitions are included in the Company's consolidated financial statements as of the date of the acquisition.

Fair Value of Financial Instruments

Assets and liabilities recorded at fair value in the Condensed Balance Sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair value. The categories, as defined by the standard are as follows:

Level Input:	Input Definition:
Level I	Inputs are unadjusted, quoted prices for identical assets or liabilities in active markets at the measurement date.
Level II	Inputs, other than quoted prices included in Level I, that are observable for the asset or liability through corroboration with market data at the measurement date.
Level III	Unobservable inputs that reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date.

For certain of our financial instruments, including accounts receivable, accounts payable, contract payable, accrued payroll and other expenses, and accrued bonus to officer, the amounts approximate fair value due to their short maturities.

Research and Development Costs

Research and development costs are charged to expense as incurred until technological feasibility has been established. These costs include salaries, laboratory experiment, and purchased software that was developed by other companies and incorporated into, or used in the development of, our final products.

Income Taxes

The Company accounts for income taxes in accordance with ASC 740-10, *"Income Taxes"* which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns.

Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each year end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized. The provision for income taxes represents the tax payable for the period and the change during the period in deferred tax assets and liabilities.

Stock-Based Compensation

The Company accounts for stock options using the modified prospective method in accordance with FASB ASC 718-10, *"Compensation-Stock Compensation"*. Under this method, compensation costs include estimated grant date fair value of the awards amortized over the options' vesting period. Stock-based compensation was $865,848, $562,079 and $585,018 for the fiscal years ended August 31, 2019, 2018 and 2017, respectively, and is included in the statements of operations as Consulting, Salaries, and Research and Development expense.

ITEM 7A – QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As of August 31, 2019, and August 31, 2018, we had cash and cash equivalents of $11.44 million and $9.40 million, respectively. We do not hold any investments that are exposed to market risk related to changes in interest rates, which could adversely affect the value of our assets and liabilities, and we do not hold any instruments for trading purposes and investment. Some of our cash and cash equivalents are held in money market accounts; however, they are not exposed to market rate risk.

In the years ended August 31, 2019, 2018, and 2017 we sold $4.15 million, $3.57 million and $2.75 million, respectively, of software through representatives in certain Asian markets in local currencies. As a result, our financial position, results of operations, and cash flows can be affected by fluctuations in foreign currency exchange rates, particularly fluctuations in the yen and RMB exchange rates. These transactions give rise to receivables that are denominated in currencies other than the entity's functional currency. The value of these receivables is subject to changes because the receivables may become worth more or less due to changes in currency exchange rates. The majority of our software license agreements are denominated in U.S. dollars. We record foreign gains and losses as they are realized. We mitigate our risk from foreign currency fluctuations by adjusting prices in our foreign markets on a periodic basis. We base these changes on market conditions while working closely with our representatives. We do not hedge currencies or enter into derivative contracts.

ITEM 8 - FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

See the financial statements included elsewhere in this report beginning at page F-1, which are incorporated herein by reference.

ITEM 9 – CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our Chief Executive Officer and our Chief Financial Officer, after evaluating our "disclosure controls and procedures" (as defined in Securities Exchange Act of 1934 (the "Exchange Act") Rules 13a-15(e) and 15d-15(e) as of the end of the period covered by this Annual Report on Form 10-K (the "Evaluation Date"), have concluded that as of the Evaluation Date, our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms, and to ensure that information required to be disclosed by us in such reports is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, where appropriate, to allow timely decisions regarding required disclosure.

Management Report on Internal Control over Financial Reporting

Our 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) to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of consolidated financial statements for external purposes in accordance with U.S. GAAP. Management assessed our internal control over financial reporting as of August 31, 2019, the end of our fiscal year. Management based its assessment on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Management's assessment included evaluation of elements such as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies, and our overall control environment.

Based on this assessment, management has concluded that our internal control over financial reporting was effective as of the end of the fiscal year to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external reporting purposes in accordance with U.S. GAAP. We reviewed the results of management's assessment with the Audit Committee of our Board of Directors.

Our independent registered public accounting firm, Rose Snyder and Jacobs LLP, independently assessed the effectiveness of the Company's internal control over financial reporting, as stated in the firm's attestation report, which is included within Part II, Item 8 of this Form 10-K.

Inherent Limitations on Effectiveness of Controls

Our management, including the CEO and CFO, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well-designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of the effectiveness of controls to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

Changes in Internal Control over Financial Reporting

No change in the Company's internal controls over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act) occurred during the Company's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B - OTHER INFORMATION

None.

PART III

ITEM 10 – DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

Information required by Item 10 is incorporated by reference from the sections entitled “Board Matters and Corporate Governance,” “Election of Directors,” “Executive Compensation and Other Information,” and “Security Ownership of Certain Beneficial Owners and Management” in our definitive proxy statement on Schedule 14A to be distributed in connection with our 2017 Annual Shareholders’ Meeting (the “Proxy Statement”).

There have been no material changes to the procedures by which security holders may recommend nominees to our board of directors since we last described such procedures.

The Company has a Corporate Code of Ethics which is posted on our website: www.simulations-plus.com.

ITEM 11 – EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated by reference from the sections entitled “Executive Compensation and Other Information” and “Board Matters and Corporate Governance” in the Proxy Statement.

ITEM 12 - SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by Item 12 is incorporated by reference from the sections entitled “Security Ownership of Certain Beneficial Owners and Management” and “Executive Compensation and Other Information” in the Proxy Statement.

ITEM 13 – CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated by reference from the subsection entitled “Certain Relationships and Related Transactions; Transactions with Related Persons” and the section entitled “Board Matters and Corporate Governance” in the Proxy Statement.

ITEM 14 – PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by Item 14 is incorporated by reference from the section of the proposal entitled “Ratification of Selection of Independent Registered Public Accounting Firm” in the Proxy Statement.

PART IV

ITEM 15 – EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a)

(1) Financial Statements. The consolidated financial statements are included in this Annual Report on Form 10-K beginning on page F-1.

(2) Financial Statement Schedules. All financial statement schedules have been omitted since the information is either not applicable or required or was included in the financial statements or notes included in this Annual Report on Form 10-K.

(3) List of Exhibits required by Item 601 of Regulation S-K. See part (b) below.

(b) Exhibits. The following exhibits are filed or furnished with this report. Those exhibits marked with a (†) refer to management contracts or compensatory plans or arrangements.

EXHIBIT NUMBER	DESCRIPTION
2.1 (4)^	Agreement and Plan of Merger, dated July 23, 2014, by and among the Company, Cognigen Corporation and the other parties thereto.
3.1 (2)	Articles of Incorporation of the Company.
3.2 (2)	Amended and Restated Bylaws of the Company.
4.1 (1)	Form of Common Stock Certificate.
4.2 (1)	Share Exchange Agreement.
10.1 (1) (†)	The Company's 1996 Stock Option Plan and forms of agreements relating thereto.
10.2 (3) (†)	The Company's 2007 Stock Option Plan, as amended.
10.3 (10)	Second Amendment to Lease by and between the Company and Crest Development LLC, dated as of May 1, 2016.
10.4 (5) (†)	Employment Agreement by and between the Company and Walter S. Woltosz, dated as of August 8, 2016.
10.5 (6)	Form of Indemnification Agreement.
10.6 (8)	2017 Equity Incentive Plan.
10.7 (7)	Stock Purchase Agreement by and among Simulation Plus, Inc., DILIsym Services, Inc., The Shareholders' Representative and The Shareholders of DILIsym Services, Inc., dated as of May 1, 2017.
10.8 (9)(†)	Employment Agreement by and between the Company and Walter S. Woltosz, dated as of September 1, 2017.
10.9 (9) (†)	Employment Agreement by and between the Company and John DiBella, dated as of September 1, 2017.
10.10 (9) (†)	Employment Agreement by and between the Company and Thaddeus H Grasela Jr., dated as of September 2, 2017.
10.11 (11) (†)	Employment Agreement by and between the Company and Shawn O'Connor dated June 26, 2018
21.1 *	List of Subsidiaries.
23.1 *	Consent of Independent Registered Public Accounting Firm.
31.1 *	Section 302 – Certification of the Principal Executive Officer.
31.2 *	Section 302 – Certification of the Principal Financial Officer.
32.1 *	Section 906 – Certification of the Chief Executive Office and Chief Financial Officer.
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.

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^	Schedules and exhibits omitted pursuant to Item 601(b)(2) of Registration S-K. The registrant agrees to furnish supplementally a copy of any omitted schedule to the SEC upon request.
*	Filed herewith.
**	The XBRL related information in Exhibit 101 shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to liability of that section and shall not be incorporated by reference into any filing or other document pursuant to the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such filing or document.
(1)	Incorporated by reference to the Company's Registration Statement on Form SB-2 (Registration No. 333-6680) filed on March 25, 1997.
(2)	Incorporated by reference to an exhibit to the Company's Form 10-K for the fiscal year ended August 31, 2010.
(3)	Incorporated by reference to an exhibit to the Company's Form 10-Q filed April 9, 2014.
(4)	Incorporated by reference to an exhibit to the Company's Form 8-K/A filed November 18, 2014.
(5)	Incorporated by reference to an exhibit to the Company's Form 8-K filed August 11, 2016.
(6)	Incorporated by reference to an exhibit to the Company's Form 8-K filed August 10, 2016.
(7)	Incorporated by reference to an exhibit to the Company's Form 10-Q filed July 10, 2017.
(8)	Incorporated by reference to Appendix A to the Company's Schedule 14A filed December 29. 2016.
(9)	Incorporated by reference to an exhibit to the Company's Form 8-K filed September 6, 2017.
(10)	Incorporated by reference to an exhibit to the Company's Form 10-K for the fiscal year ended August 31, 2016.
(11)	Incorporated by reference to an exhibit to the Company's Form 10-Q filed July 10, 2018.

(c) Financial Statement Schedule.

See Item 15(a)(2) above.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

November 13, 2019

SIMULATIONS PLUS, INC.

By: /s/ John R. Kneisel
John R. Kneisel
Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, 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
/s/ Shawn O'Connor Shawn O'Connor November 13, 2019	Chief Executive Officer (Principal executive officer)
/s/ Walter S. Woltosz Walter S. Woltosz November 13, 2019	Chairman of the Board of Directors
/s/ Dr. Lisa LaVange Lisa LaVange November 13, 2019	Director
/s/ Dr. Daniel Weiner Dr. Daniel Weiner November 13, 2019	Director
/s/ Dr. David L. Ralph Dr. David L. Ralph November 13, 2019	Director
/s/ Dr. John K. Paglia John K. Paglia November 13, 2019	Director
/s/ John R. Kneisel John R. Kneisel November 13, 2019	Chief Financial Officer of the Company (Principal financial officer and principal accounting officer)

SIMULATIONS PLUS, INC. & SUBSIDIARY
CONTENTS
August 31, 2019, 2018 and 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Simulations Plus, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Simulations Plus, Inc. and subsidiaries (the Company) as of August 31, 2019 and 2018, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the years in the three-year period ended August 31, 2019, and the related notes (collectively referred to as the financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of August 31, 2019 and 2018, and the consolidated results of its operations and its cash flows for each of the years in the three-year period ended August 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of August 31, 2019, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated November 13, 2019, expressed an unqualified opinion thereon.

Basis for Opinion

These consolidated 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 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. 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Rose, Snyder & Jacobs LLP

Rose, Snyder & Jacobs LLP

We have served as the Company's auditor since 2004.

Encino, California

November 13, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Simulations Plus, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Simulations Plus, Inc. and subsidiaries (the Company's) internal control over financial reporting as of August 31, 2019, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of August 31, 2019, based on criteria established in *Internal Control—Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Simulations Plus, Inc. and subsidiaries as of August 31, 2019 and 2018 and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended August 31,2019 and related notes, and our report dated November 13, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's 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 company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Rose, Snyder & Jacobs LLP

Rose, Snyder & Jacobs LLP

Encino, California

November 13, 2019

SIMULATIONS PLUS, INC.
CONSOLIDATED BALANCE SHEETS
As of August 31

	August 31, 2019	August 31, 2018
ASSETS		
Current assets		
Cash and cash equivalents	$ 11,435,499	$ 9,400,701
Accounts receivable, net of allowance for doubtful accounts of $0	5,026,558	5,514,528
Revenues in excess of billings	3,233,659	1,985,596
Prepaid income taxes	765,110	312,593
Prepaid expenses and other current assets	704,316	610,439
Total current assets	21,165,142	17,823,857
Long-term assets		
Capitalized computer software development costs, net of accumulated amortization of $12,356,055 and $11,095,903	4,959,736	5,152,594
Property and equipment, net (note 4)	341,145	335,224
Intellectual property, net of accumulated amortization of $3,948,750 and $3,019,584	5,026,249	5,905,416
Other intangible assets net of accumulated amortization of $1,210,000 and $852,500	3,280,000	3,637,500
Goodwill	10,387,198	10,387,198
Other assets	37,227	37,227
Total assets	**$ 45,196,697**	**$ 43,279,016**
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 204,075	$ 351,605
Accrued payroll and other expenses	1,639,038	1,152,176
Current portion - Contracts payable (note 5)	1,761,028	2,556,644
Billings in excess of revenues	798,549	384,603
Deferred revenue	380,787	381,928
Total current liabilities	4,783,477	4,826,956
Long-term liabilities		
Deferred income taxes,net	2,731,616	3,195,139
Payments due under Contracts payable (note 5)	–	3,334,296
Total liabilities	7,515,093	11,356,391
Commitments and contingencies (note 6)		
Shareholders' equity (note 7)		
Preferred stock, $0.001 par value 10,000,000 shares authorized no shares issued and outstanding	$ –	$ –
Common stock, $0.001 par value 50,000,000 shares authorized 17,591,834 and 17,416,445 shares issued and outstanding	7,595	7,417
Additional paid-in capital	15,319,474	13,453,668
Retained earnings	22,354,535	18,461,540
Total shareholders' equity	37,681,604	31,922,625
Total liabilities and shareholders' equity	**$ 45,196,697**	**$ 43,279,016**

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

SIMULATIONS PLUS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
For the years ended August 31,

	2019	2018	2017
Revenues	$ 33,970,440	$ 29,666,524	$ 24,137,913
Cost of revenues	9,025,704	7,994,228	6,307,800
Gross margin	24,944,736	21,672,296	17,830,113
Operating expenses			
Selling, general, and administrative	11,796,027	9,583,852	8,198,184
Research and development	2,499,980	1,790,656	1,367,645
Total operating expenses	14,296,007	11,374,508	9,565,829
Income from operations	10,648,729	10,297,788	8,264,284
Other income (expense)			
Interest income	33,522	27,122	15,857
Interest expense	(109,078)	(153,034)	(38,188)
(Loss) income on currency exchange	(16,697)	(32,934)	(1,686)
Total other income (expense)	(92,253)	(158,846)	(24,017)
Income before provision for income taxes	10,556,476	10,138,942	8,240,267
Provision for income taxes	(1,973,147)	(1,204,130)	(2,452,670)
Net Income	**$ 8,583,329**	**$ 8,934,812**	**$ 5,787,597**
Earnings per share			
Basic	**$ 0.49**	**$ 0.52**	**$ 0.34**
Diluted	**$ 0.48**	**$ 0.50**	**$ 0.33**
Weighted-average common shares outstanding			
Basic	**17,492,258**	**17,328,707**	**17,239,490**
Diluted	**18,057,431**	**17,860,392**	**17,515,917**

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

STATEMENTS OF SHAREHOLDERS' EQUITY
For the years ended August 31, 2019, 2018 and 2017

	Common Stock		Additional Paid-In	Retained	
	Shares	Amount	Capital	Earnings	Total
Balance, August 31, 2016	**17,225,478**	**$ 7,227**	**$ 11,376,007**	**$ 11,349,360**	**$ 22,732,594**
Exercise of stock options	49,642	49	111,355		111,404
Stock-based Compensation			585,018		585,018
Shares issued to Directors for services	2,484	2	36,761		36,763
Declaration of Dividend				(3,448,489)	(3,448,489)
Net income				5,787,597	5,787,597
Balance, August 31, 2017	**17,277,604**	**$ 7,278**	**$ 12,109,141**	**$ 13,688,468**	**$ 25,804,887**
Exercise of stock options	130,006	131	635,452	–	635,583
Stock-based Compensation	–	–	562,078	–	562,078
Shares issued to Directors for services	8,835	8	146,997	–	147,005
Declaration of Dividend	–	–	–	(4,161,740)	(4,161,740)
Net income	–	–	–	8,934,812	8,934,812
Balance, August 31, 2018	**17,416,445**	**$ 7,417**	**$ 13,453,668**	**$ 18,461,540**	**$ 31,922,625**
Cumulative Effect of Changes related to adoption of ASC 606	–	–	–	(493,279)	(493,279)
Exercise of stock options	166,703	168	787,979	–	788,147
Stock-based Compensation	–		865,848	–	865,848
Shares issued to Directors for services	8,686	10	211,979	–	211,989
Declaration of Dividend	–	2	–	(4,197,055)	(4,197,055)
Net income	–	–	–	8,583,329	8,583,329
Balance, August 31, 2019	**17,591,834**	**$ 7,595**	**$ 15,319,474**	**$ 22,354,535**	**$ 37,681,604**

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

CONSOLIDATED STATEMENTS OF CASH FLOWS
For the years ended August 31, 2019, 2018 and 2017

	2019	2018	2017
Cash flows from operating activities			
Net income	$ 8,583,329	$ 8,934,812	$ 5,787,597
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	2,750,245	2,721,304	2,135,078
Change in value of contingent consideration	109,060	152,752	38,188
Stock-based compensation	1,077,837	709,083	621,781
Deferred income taxes	(299,096)	(1,731,821)	(178,374)
(Increase) decrease in			
Accounts receivable	487,970	(1,465,803)	(876,231)
Revenues in excess of billings	(1,248,063)	(504,514)	(634,409)
Prepaid income taxes	(452,517)	149,850	93,043
Prepaid expenses and other assets	(93,877)	(153,682)	40,528
Increase (decrease) in			
Accounts payable	(147,529)	110,713	99,337
Accrued payroll and other expenses	486,862	168,883	283,831
Billings in excess of revenues	413,946	167,645	(118,061)
Accrued income taxes	–	–	(153,713)
Other liabilities	–	–	(8,274)
Deferred revenue	(29,747)	27,966	(252,582)
Net cash provided by operating activities	11,638,420	9,287,188	6,877,739
Cash flows used in investing activities			
Purchases of property and equipment	(137,745)	(183,291)	(175,961)
Purchases of intellectual property	(50,000)	–	–
Cash used to acquire subsidiaries	–	–	(4,515,982)
Cash received in acquisition	–	–	1,720,434
Capitalized computer software development costs	(1,767,996)	(2,145,429)	(1,383,711)
Net cash used in investing activities	(1,955,741)	(2,328,720)	(4,355,220)
Cash flows used in financing activities			
Payment of dividends	(4,197,055)	(4,161,740)	(3,448,489)
Payments on Contracts Payable	(4,238,973)	(247,328)	(1,000,000)
Proceeds from the exercise of stock options	788,147	635,583	111,404
Net cash used in financing activities	(7,647,881)	(3,773,485)	(4,337,085)
Net increase (decrease) in cash and cash equivalents	2,034,798	3,184,983	(1,814,566)
Cash and cash equivalents, beginning of year	9,400,701	6,215,718	8,030,284
Cash and cash equivalents, end of period	**$ 11,435,499**	**$ 9,400,701**	**$ 6,215,718**
Supplemental disclosures of cash flow information			
Income taxes paid	$ 2,673,475	$ 2,712,988	$ 2,687,921
Non-Cash Investing and Financing Activities			
Creation of contract liabilities for acquisition of subsidiaries	$ –	$ –	$ 5,738,188

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

NOTE 1 - ORGANIZATION AND LINES OF BUSINESS

Organization

Simulations Plus, Inc. ("Simulations Plus", "Lancaster") was incorporated on July 17, 1996. In September 2014, Simulations Plus acquired all of the outstanding equity interests of Cognigen Corporation ("Cognigen", "Buffalo") and Cognigen became a wholly owned subsidiary of Simulations Plus, Inc. Simulations Plus, Inc. In June 2017, Simulations Plus acquired DILIsym Services, Inc. (DILIsym) as a wholly owned subsidiary (collectively, "Company", "we", "us", "our").

Lines of Business

The Company designs and develops pharmaceutical simulation software to promote cost-effective solutions to a number of problems in pharmaceutical research and in the education of pharmacy and medical students, and it provides consulting services to the pharmaceutical and chemical industries. Recently, the Company has begun to explore developing software applications outside of the pharmaceutical industry.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements include the accounts of Simulations Plus, Inc. and, as of September 2, 2014, its wholly owned subsidiary, Cognigen Corporation, and as of June 1, 2017 the accounts of DILIsym Services, Inc. All significant intercompany accounts and transactions are eliminated in consolidation.

Use of Estimates

Our financial statements and accompanying notes are prepared in accordance with accounting principles generally accepted in the United States of America. Preparing financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses. These estimates and assumptions are affected by management's application of accounting policies. Actual results could differ from those estimates. Significant accounting policies for us include revenue recognition, accounting for capitalized computer software development costs, valuation of stock options, and accounting for income taxes.

Reclassifications

Certain numbers in the prior year have been reclassified to conform to the current year's presentation.

Revenue Recognition

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09 and its related amendments regarding Accounting Standards Codification Topic 606 (ASC Topic 606), *Revenue from Contracts with Customers*. The standard provides principles for recognizing revenue for the transfer of promised goods or services to customers with the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard also provides guidance on the recognition of incremental costs related to obtaining customer contracts. We adopted ASC Topic 606, effective September 1, 2018, utilizing the modified retrospective method. This approach was applied to contracts that were in process as of September 1, 2018, and the corresponding incremental costs of obtaining those contracts, which resulted in a cumulative effect adjustment of $493,279 to the opening balance of retained earnings at the date of adoption. The adoption of this ASU primarily impacts the timing of our revenue recognition for certain sales contracts, the capitalization and amortization of incremental costs of obtaining a contract, and related disclosures. The reported results for fiscal year 2019 reflect the application of ASC Topic 606, while the reported results for fiscal year 2018 are not adjusted and continue to be reported under ASC Topic 605.

We generate revenue primarily from the sale of software licenses and providing consulting services to the pharmaceutical industry for drug development.

The Company determines revenue recognition through the following steps:

i. Identification of the contract, or contracts, with a customer
ii. Identification of the performance obligations in the contract
iii. Determination of the transaction price
iv. Allocation of the transaction price to the performance obligations in the contract
v. Recognition of revenue when, or as, the Company satisfies a performance obligation

Deferred Commissions

Sales commissions earned by our sales force and our commissioned sales representatives are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for new contracts are deferred and then amortized on a straight-line basis over a period of benefit. We determined the period of benefit by taking into consideration our customer contracts, our technology and other factors. Sales commissions for renewal contracts are deferred and then amortized on a straight-line basis over the related contractual renewal period. Amortization expense is included in sales and marketing expenses on the condensed consolidated statements of operations.

We apply the practical expedient in ASC Topic 606 to expense costs as incurred for sales commissions when the period of benefit would have been one year or less. Most of our contracts are of a duration of one year or less, few, if any of the longer-term contracts have commissions associated with them.

Practical Expedients and Exemptions

The Company has elected the following additional practical expedients in applying Topic 606:

- ***Commission Expense***: We apply the practical expedient in ASC Topic 606 to expense costs as incurred for sales commissions when the period of benefit is one year or less. Most of our contracts are of a duration of one year or less, few, if any of the longer-term contracts have commissions associated with them.

- ***Transaction Price Allocated to Future Performance Obligations***

  ASC 606 requires that the Company disclose the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied as of August 31, 2019. ASC 606 provides certain practical expedients that limit the requirement to disclose the aggregate amount of transaction price allocated to unsatisfied performance obligations.

  The Company applied the practical expedient to not disclose the amount of transaction price allocated to unsatisfied performance obligations when the performance obligation is part of a contract that has an original expected duration of one year or less.

Cash and Cash Equivalents
For purposes of the statements of cash flows, the Company considers all highly liquid investments purchased with original maturities of three months or less to be cash equivalents.

Accounts Receivable
We analyze the age of customer balances, historical bad debt experience, customer creditworthiness, and changes in customer payment terms when making estimates of the collectability of the Company's trade accounts receivable balances. If we determine that the financial conditions of any of our customers have deteriorated, whether due to customer-specific or general economic issues, an increase in the allowance may be made. Accounts receivable are written off when all collection attempts have failed.

Capitalized Computer Software Development Costs

Software development costs are capitalized in accordance with ASC 985-20, *"Costs of Software to Be Sold, Leased, or Marketed"*. Capitalization of software development costs begins upon the establishment of technological feasibility and is discontinued when the product is available for sale.

The establishment of technological feasibility and the ongoing assessment for recoverability of capitalized software development costs require considerable judgment by management with respect to certain external factors including, but not limited to, technological feasibility, anticipated future gross revenues, estimated economic life, and changes in software and hardware technologies. Capitalized computer software development costs are comprised primarily of salaries and direct payroll-related costs and the purchase of existing software to be used in the Company's software products.

Amortization of capitalized computer software development costs is provided on a product-by-product basis on the straight-line method over the estimated economic life of the products not to exceed five years. Amortization of software development costs amounted to $1,331,753, $1,300,434, and $1,096,967 for the years ended August 31, 2019, 2018, and 2017, respectively. We expect future amortization expense to vary due to increases in capitalized computer software development costs.

We test capitalized computer software development costs for recoverability whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

Property and Equipment

Property and equipment are recorded at cost, or fair market value for property and equipment acquired in business combinations, less accumulated depreciation and amortization. Depreciation and amortization are provided using the straight-line method over the estimated useful lives as follows:

Equipment	5 years
Computer equipment	3 to 7 years
Furniture and fixtures	5 to 7 years
Leasehold improvements	Shorter of life of asset or lease

Maintenance and minor replacements are charged to expense as incurred. Gains and losses on disposals are included in the results of operations.

Intangible Assets and Goodwill

The Company performs valuations of assets acquired and liabilities assumed on each acquisition accounted for as a business combination and recognizes the assets acquired and liabilities assumed at their acquisition date fair value. Acquired intangible assets include customer relationships, software, trade name, and non-compete agreements. The Company determines the appropriate useful life by performing an analysis of expected cash flows based on historical experience of the acquired businesses. Intangible assets are amortized over their estimated useful lives using the straight-line method, which approximates the pattern in which the majority of the economic benefits are expected to be consumed.

Goodwill represents the excess of the cost of an acquired entity over the fair value of the acquired net assets. Goodwill is not amortized, instead it is tested for impairment annually or when events or circumstances change that would indicate that goodwill might be impaired. Events or circumstances that could trigger an impairment review include, but are not limited to, a significant adverse change in legal factors or in the business climate, an adverse action or assessment by a regulator, unanticipated competition, a loss of key personnel, significant changes in the manner of the Company's use of the acquired assets or the strategy for the Company's overall business, significant negative industry or economic trends or significant under-performance relative to expected historical or projected future results of operations.

Goodwill is tested for impairment at the reporting unit level, which is one level below or the same as an operating segment. As of August 31, 2019, the Company determined that it has three reporting units, Simulations Plus, Cognigen Corporation and DILIsym Services, Inc. When testing goodwill for impairment, the Company first performs a qualitative assessment to determine whether it is necessary to perform step one of a two-step annual goodwill impairment test for each reporting unit. The Company is required to perform step one only if it concludes that it is more likely than not that a reporting unit's fair value is less than its carrying value. Should this be the case, the first step of the two-step process is to identify whether a potential impairment exists by comparing the estimated fair values of the Company's reporting units with their respective book values, including goodwill. If the estimated fair value of the reporting unit exceeds book value, goodwill is considered not to be impaired, and no additional steps are necessary. If, however, the fair value of the reporting unit is less than book value, then the second step is performed to determine if goodwill is impaired and to measure the amount of impairment loss, if any. The amount of the impairment loss is the excess of the carrying amount of the goodwill over its implied fair value. The estimate of implied fair value of goodwill is primarily based on an estimate of the discounted cash flows expected to result from that reporting unit, but may require valuations of certain internally generated and unrecognized intangible assets such as the Company's software, technology, patents and trademarks. If the carrying amount of goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to the excess.

As of August 31, 2019, the entire balance of goodwill was attributed to two of the Company's reporting units, Cognigen Corporation and DILIsym Services. Intangible assets subject to amortization are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable. The Company has not recognized any impairment charges during the periods ended August 31, 2019, 2018 and 2017.

Reconciliation of Goodwill for the period ended August 31, 2019:

	Cognigen	DILIsym	Total
Balance, August 31, 2016	**$ 4,789,248**	$ –	**$ 4,789,248**
Addition	–	5,597,950	5,597,950
Impairments	–	–	–
Balance, August 31, 2017	**4,789,248**	**5,597,950**	**10,387,198**
Addition	–	–	–
Impairments	–	–	–
Balance, August 31, 2018	**4,789,248**	**5,597,950**	**10,387,198**
Addition	–	–	–
Impairments	–	–	–
Balance, August 31, 2019	**$ 4,789,248**	**$ 5,597,950**	**$ 10,387,198**

Other Intangible Assets

The following table summarizes other intangible assets as of August 31, 2019:

	Amortization Period	Acquisition Value	Accumulated Amortization	Net book value
Customer relationships-Cognigen	Straight line 8 years	$ 1,100,000	$ 687,500	$ 412,500
Trade Name-Cognigen	None	500,000	0	500,000
Covenants not to compete-Cognigen	Straight line 5 years	50,000	50,000	0
Covenants not to compete-DILIsym	Straight line 4 years	80,000	45,000	35,000
Trade Name-DILIsym	None	860,000	0	860,000
Customer relationships-DILIsym	Straight line 8 years	1,900,000	427,500	1,472,500
		$ 4,490,000	**$ 1,210,500**	**$ 3,280,000**

Amortization expense for the year ended August 31, 2019, 2018 and 2017 was $357,500, $357,500, and $200,000.

Future amortization for the next five years is as follows:

Year ending August 31,	Amount
2020	$ 347,500
2021	$ 342,500
2022	$ 327,500
2023	$ 190,000
2024	$ 190,000

Business Acquisitions

The Company accounted for the acquisition of Cognigen and DILIsym Services, Inc., using the purchase method of accounting where the assets acquired and liabilities assumed are recognized based on their respective estimated fair values. The excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Determining the fair value of certain acquired assets and liabilities is subjective in nature and often involves the use of significant estimates and assumptions, including, but not limited to, the selection of appropriate valuation methodology, projected revenue, expenses and cash flows, weighted average cost of capital, discount rates, estimates of advertiser and publisher turnover rates and estimates of terminal values. Business acquisitions are included in the Company's consolidated financial statements as of the date of the acquisition.

Fair Value of Financial Instruments

Assets and liabilities recorded at fair value in the Condensed Balance Sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair value. The categories, as defined by the standard are as follows:

Level Input:	Input Definition:
Level I	Inputs are unadjusted, quoted prices for identical assets or liabilities in active markets at the measurement date.
Level II	Inputs, other than quoted prices included in Level I, that are observable for the asset or liability through corroboration with market data at the measurement date.
Level III	Unobservable inputs that reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date.

For certain of our financial instruments, including accounts receivable, accounts payable, accrued payroll and other expenses, and accrued bonuses to officers the carrying amounts are approximate fair value due to their short-term nature.

The following table summarizes fair value measurements at August 31, 2019 and August 31, 2018 for assets and liabilities measured at fair value on a recurring basis:

August 31, 2019:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	$ 11,435,499	$ –	$ –	$ 11,435,499
Acquisition-related contingent consideration obligations	$ –	$ –	$ 1,761,028	$ 1,761,028

August 31, 2018:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	$ 9,400,701	$ –	$ –	$ 9,400,701
Acquisition-related contingent consideration obligations	$ –	$ –	$ 4,890,940	$ 4,890,940

As of August 31, 2019 and 2018, the Company has a liability for contingent consideration related to its acquisition of the DILIsym Services, Inc. The fair value measurement of the contingent consideration obligations is determined using Level 3 inputs. The fair value of contingent consideration obligations is based on a discounted cash flow model using a probability-weighted income approach. These fair value measurements represent Level 3 measurements as they are based on significant inputs not observable in the market. Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period. Accordingly, changes in assumptions could have a material impact on the amount of contingent consideration expense the Company records in any given period. Changes in the value of the contingent consideration obligations are recorded in the Company's Consolidated Statement of Operations.

The following is a reconciliation of contingent consideration value.

Value at August 31, 2018	**$ 4,890,940**
Purchase price contingent consideration	–
Contingent consideration payments	(3,238,972)
Change in value of contingent consideration	109,060
Value at August 31, 2019	**$ 1,761,028**

Advertising

The Company expenses advertising costs as incurred. Advertising costs for the years ended August 31, 2019, 2018 and 2017 were approximately $83,213, $67,848 and $58,445, respectively.

Research and Development Costs

Research and development costs are charged to expense as incurred until technological feasibility has been established. These costs include salaries, laboratory experiment, and purchased software which was developed by other companies and incorporated into, or used in the development of, our final products.

Income Taxes

The Company accounts for income taxes in accordance with ASC 740-10, *"Income Taxes"* which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns.

Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each year-end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized. The provision for income taxes represents the tax payable for the period and the change during the period in deferred tax assets and liabilities.

Intellectual property

On February 28, 2012, we bought out the royalty agreement with Enslein Research. The cost of $75,000 is being amortized over 10 years under the straight-line method. Amortization expense for each of the fiscal years ended August 31, 2019, 2018 and 2017 was $7,500. Accumulated amortization as of August 31, 2019 and 2018 was $56,250 and $48,750, respectively.

On May 15, 2014, we entered into a termination and non-assertion agreement with TSRL, Inc., pursuant to which the parties agreed to terminate an exclusive software licensing agreement entered into between the parties in 1997. As a result, the Company obtained a perpetual right to use certain source code and data, and TSRL relinquished any rights and claims to any GastroPlus products and to any claims to royalties or other payments under that 1997 agreement. We agreed to pay TSRL total consideration of $6,000,000, which is being amortized over 10 years under the straight-line method. Amortization for the year ended August 31, 2019, 2018 and 2017 was $600,000. Accumulated amortization as of August 31, 2019 and 2018 was $3,175,000 and $2,575,000, respectively.

On June 1, 2017, as part of the acquisition of DILIsym Services, Inc. the Company acquired certain developed technologies associated with the drug induced liver disease (DILI). These technologies were valued at $2,850,000 and are being amortized over 9 years under the straight-line method. Amortization expense for the fiscal years ended August 31, 2019 and 2018 was $316,667 and $316,667, respectively, and is included in cost of revenues. Total accumulated amortization as of August 31, 2019 and 2018 was $712,513 and $395,833, respectively.

In September 2018, we purchased certain intellectual property rights of Entelos Holding Company, a Delaware Corporation. The cost of $50,000 is being amortized over 10 years under the straight-line method. Amortization expense for the year ended August 31, 2019 was $5,000. Accumulated amortization as of August 31, 2019 was $5,000.

Total amortization expense for intellectual property agreements for the years ended August 31, 2019, 2018 and 2017 was $929,167, $924,167, and $686,667. Accumulated amortization as of August 31, 2019 and 2018 was $3,948,750 and $3,019,584, respectively.

Future amortization for the next five years is as follows:

Years ending August 31,	TSRL	Enslein	DILI-Acquired Developed Technologies	Entelos	Total
2020	$ 600,000	$ 7,500	$ 316,667	$ 5,000	$ 929,167
2021	$ 600,000	$ 7,500	$ 316,667	$ 5,000	$ 929,167
2022	$ 600,000	$ 3,750	$ 316,667	$ 5,000	$ 925,417
2023	$ 600,000	–	$ 316,667	$ 5,000	$ 921,667
2024	$ 425,000	–	$ 316,667	$ 5,000	$ 746,667

Earnings per Share

The Company reports earnings per share in accordance with FASB ACS 260-10. Basic earnings per share is computed by dividing income available to common shareholders by the weighted-average number of common shares available. Diluted earnings per share is computed similarly to basic earnings per share except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potential common shares had been issued and if the additional common shares were dilutive. The components of basic and diluted earnings per share for the years ended August 31, 2019, 2018 and 2017 were as follows:

	2019	2018	2017
Numerator			
Net income attributable to common shareholders	**$ 8,583,329**	**$ 8,934,812**	**$ 5,787,897**
Denominator			
Weighted-average number of common shares outstanding during the year	17,492,258	17,328,707	17,239,490
Dilutive effect of stock options	565,173	531,685	276,427
Common stock and common stock equivalents used for diluted earnings per share	**18,057,431**	**17,860,392**	**17,515,917**

Stock-Based Compensation

The Company accounts for stock options using the modified prospective method in accordance with FASB ASC 718-10, *"Compensation-Stock Compensation"*. Under this method, compensation costs include estimated grant date fair value of the awards amortized over the options' vesting period. Stock-based compensation was $865,848, $562,078 and $585,018 for the fiscal years ended August 31, 2019, 2018 and 2017, respectively, and is included in the statements of operations as Consulting, Salaries, and Research and Development expense.

Impairment of Long-lived Assets

The Company accounts for the impairment and disposition of long-lived assets in accordance with ASC 350, *"Intangibles – Goodwill and Other"* and ASC 360, *"Property and Equipment"*. Long-lived assets to be held and used are reviewed for events or changes in circumstances that indicate that their carrying value may not be recoverable. We measure recoverability by comparing the carrying amount of an asset to the expected future undiscounted net cash flows generated by the asset. If we determine that the asset may not be recoverable, or if the carrying amount of an asset exceeds its estimated future undiscounted cash flows, we recognize an impairment charge to the extent of the difference between the fair value and the asset's carrying amount. No impairment losses were recorded during the years ended August 31, 2019, 2018 and 2017.

Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09). The standard will eliminate the transaction- and industry-specific revenue recognition guidance under current generally accepted accounting principles in the U.S. (GAAP) and replace it with a principles-based approach for determining revenue recognition. The revenue recognition standard is required to be applied retrospectively, including any combination of practical expedients as allowed in the standard. In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers (Topic 606), which amends certain aspects of the Board's new revenue standard, ASU 2014-09, Revenue from Contracts with Customers. This standard was adopted concurrently with the adoption of ASU 2016-10 and both are effective for annual and interim periods beginning after December 15, 2017.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which supersedes existing guidance on accounting for leases in "Leases (Topic 840)" and generally requires all leases to be recognized in the consolidated balance sheet. ASU 2016-02 is effective for annual and interim reporting periods beginning after December 15, 2018; early adoption is permitted. The provisions of ASU 2016-02 are to be applied using a modified retrospective approach. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements.

NOTE 3 – REVENUE RECOGNITION

Components of revenue

The following is a description of principal activities from which the Company generates revenue. As part of the accounting for these arrangements, the Company must develop assumptions that require judgment to determine the stand-alone selling price for each performance obligation identified in the contract. Stand-alone selling prices are determined based on the prices at which the Company separately sells its services or goods.

Revenue Components	**Typical payment terms**
Software Revenues:	
Software revenues are generated primarily from sales of software licenses at the time the software is unlocked and the term commences. The license period typically is one year or less. Along with the license a *di minimis* amount of customer support is provided to assist the customer with the software. Should the customer need more than a di minimis amount of support they can choose to enter into a separate contract for additional training. Most software is installed on our customers' servers and the Company has no control of the software once the sale is made. For certain software arrangements the Company hosts the licenses on servers maintained by the Company, revenue for those arrangements are accounted as *Software as a Service* over the life of the contract. These arrangements are a small portion of software revenues of the Company.	Payments are generally due upon invoicing on a net 30 basis unless other payment terms are negotiated with the customer based on customer history. Typical industry standards apply.
Consulting Contracts:	
Consulting services provided to our customers are generally recognized over time as the contracts are performed and the services are rendered. The company measures its consulting revenue based on time expended compared to total estimated hours to complete a project. The Company believes the methods chosen for its contract revenue best depicts the transfer of benefits to the customer under the contracts.	Payment terms vary, depending on the size of the contract, credit history and history with the client and deliverables within the contract.

Consortium Member Based Services:	
The performance obligation is recognized on a time elapsed basis, by month, for which the services are provided, as the Company transfers control evenly over the contractual period.	Payment is due at the beginning of the period, generally on a net 30 or 60 basis.

Remaining performance obligations that do not fall under the expedients require the Company to perform various consulting and software development services and consortium memberships of approximately $6,843,000. It is anticipated these revenues will be recognized within the next two and a half years.

Contract liabilities

During the year ended August 31, 2019 the Company recognized $767,000 of revenue that was included in contract liabilities as of August 31, 2019.

Disaggregation of Revenues

Disaggregation of Revenues:	**Year Ended August 31, 2019**
Software licenses	
Point in time	$ 17,425,353
Over time	1,053,562
Consulting services	
Over time	15,491,525
Total Revenue	$ 33,970,440

The following table summarizes the adjustments made to accounts on the condensed consolidated balance sheet as of September 1, 2018 as a result of applying the modified retrospective method to adopt ASC Topic 606:

	As Reported August 31, 2018	**Adjustments to reflect the adoption of ASC Topic 606**	**As Adjusted September 1, 2018**
Capitalized Software, net	$ 5,152,594	$ (629,100)	$ 4,523,494
Deferred revenue	381,928	28,606	410,534
Deferred income taxes, net	3,195,139	(164,427)	3,030,713
Retained Earnings	$ 18,461,540	$ (493,279)	$ 17,968,261

The following tables present the amount by which each condensed consolidated financial statement line item is affected as of and for the year ended August 31, 2019 by ASC Topic 606:

	Year Ended August 31, 2019		
	As Reported	**Balances Without the adoption of ASC Topic 606**	**Effect of Change**
Revenues	$ 33,970,440	$ 33,992,369	$ (21,929)
Cost of revenues	9,025,704	8,824,474	201,230
Gross profit	24,944,736	25,167,895	(223,159)
Income from operations	10,648,729	10,871,888	(223,159)
Income before provision for income taxes	10,556,476	10,779,635	(223,159)
Provision for income taxes	(1,973,147)	(2,043,571)	(70,424)
Net income	$ 8,583,329	$ 8,736,064	$ (152,735)
Earnings per share-diluted	$ 0.48	$ 0.48	$ –
Weighted-average common shares outstanding, diluted	18,057,431	18,057,431	–

	Year Ended August 31, 2019		
	As Reported	Balances Without the adoption of ASC Topic 606	Effect of Change
Cash Flows From Operating Activities:			
Net income	$ 8,583,329	$ 8,736,064	$ (152,735)
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,750,245	2,890,389	(140,144)
Changes in operating assets and liabilities:			
Deferred revenue	(295,966)	(274,037)	21,929
Net cash provided by operating activities	11,438,762	11,167,812	(270,950)
Cash flows used in investing activities			
Capitalized computer software development costs	$ (1,767,996)	$ (2,109,369)	$ 341,373

Contracts in Progress

Contracts in progress are included in the accompanying balance sheets under the following captions:

	2019	2018
Revenues in excess of billings	$ 3,233,659	$ 1,985,596
Billings in excess of revenues	(798,549)	(384,603)
	$ 2,435,110	$ 1,600,993

Cost, estimated earnings, and billings on uncompleted contracts are summarized as follows as of August 31, 2019 and 2018:

	2019	2018
Revenues earned to date on uncompleted contracts	$ 19,254,928	$ 11,794,764
Billings to date on uncompleted contracts	(16,819,818)	(10,193,771)
	$ 2,435,110	$ 1,600,993

Balance increases and decreases in these accounts are due to the timing of amounts billed, payments received, and revenue recognized.

NOTE 4 – PROPERTY AND EQUIPMENT

Property and equipment at August 31, 2019 and 2018 consisted of the following:

	2019	2018
Equipment	$ 741,486	$ 741,984
Computer equipment	411,632	285,834
Furniture and fixtures	160,990	148,544
Leasehold improvements	110,165	110,162
	1,424,273	1,286,524
Less accumulated depreciation and amortization	1,083,128	951,300
Total	$ 341,145	$ 335,224

Depreciation expense was $131,827, $139,202, and $151,444 for the years ended August 31, 2019, 2018, and 2017, respectively.

NOTE 5: CONTRACTS PAYABLE

DILIsym Acquisition Liabilities:

On June 1, 2017, the Company acquired DILIsym Services, Inc. The agreement provided for a working capital adjustment, an eighteen-month $1,000,000 holdback provision against certain representations and warrantees, and an Earn-out agreement of up to an additional $5,000,000 in Earn-out payments based on earnings over the next three years. The Earn-out liability has been recorded at an estimated fair value. Payments under the Earn-out liability will be due starting in FY 2018. In September 2018, $1,556,644 was paid out under the first earn-out payment, a second earn-out payment was made in August 2019 in the amount of $1,682,329 it is estimated that a final payment of approximately $1,761,028 will be paid in August 2020.

As of August 31, 2019 and 2018 the following liabilities have been recorded:

	2019	2018
Working Capital Liability	$ –	$ –
Holdback Liability	–	1,000,000
Earn-out Liability	1,761,028	4,890,940
Sub Total	$ 1,761,028	$ 5,890,940
Less: Current Portion	1,761,028	2,556,644
Long-Term	$ –	$ 3,334,296

NOTE 6 - COMMITMENTS AND CONTINGENCIES

Leases

We lease approximately 13,500 square feet of space in Lancaster, California. The original lease had a five-year term with two, three-year options to extend. The initial five-year term expired in February 2011, and we extended the lease to February 2, 2014. In June 2013, the lease was amended to extend the term to February 2, 2017. The amended lease also provides for an annual base rent increase of 3% per year and two, two-year options to extend. In May 2016 the Company exercised the two, two-year options extending the term of the lease through February 2, 2021 at a fixed rate of $25,000 per month. The new extension agreement allowed the Company with 90 days' notice to opt out of the remaining lease in the last two years of the term upon payment of a recapture payment equal to the 3% base payment increase that would have been due under the original agreement.

Our Buffalo subsidiary leases approximately 12,623 square feet of space in Buffalo, New York. The initial five-year term expired in October 2018 and was renewed for a three year option to extending it to October 2021. The new base rent is $16,147 per month.

In September 2017 DILIsym service signed a 3-year lease for approximately 1,900 rentable square feet of space in Research Triangle Park, North Carolina. The initial three-year term expires in October 2020. The initial base rent is $3,975 per month with an annual 3% adjustment. Prior to this lease DILIsym was on a month-to-month rental.

Rent expense, including common area maintenance fees for the years ended August 31, 2019, 2018 and 2017 was $584,000, $567,000 and $509,600, respectively.

Future minimum lease payments under non-cancelable operating leases with remaining terms of one year or more at August 31, 2019 were as follows:

Years Ending August 31,	
2020	566,000
2021	327,000
2022	49,000
	$ 942,000

Employment Agreements

In the normal course of business the Company has entered into employment agreements with certain of its key management personnel that may require compensation payments upon termination.

License Agreement

The Company has a royalty agreement with Dassault Systèmes Americas Corp. for access to their Metabolite Database for developing our Metabolite Module within ADMET Predictor™. The module was renamed the Metabolism Module when we released ADMET Predictor version 6 on April 19, 2012. Under this agreement, we pay a royalty of 25% of revenue derived from the sale of the Metabolism/Metabolite module. Under this agreement for the year ended August 31, 2019, 2018 and 2017 we incurred royalty expense of $195,828, $175,740 and $139,551, respectively.

Dassault Systèmes has indicated they are no longer making access to this data base available for purchase, the Company is in the process of making arrangements to replace the database.

Litigation

We are not a party to any legal proceedings and are not aware of any pending legal proceedings of any kind.

NOTE 7 - SHAREHOLDERS' EQUITY

Dividend

The Company's Board of Directors declared cash dividends during fiscal year 2019, 2018 and 2017. The details of dividend paid are in the following tables:

FY2017

Record Date	Distribution Date	Number of Shares Outstanding on Record Date	Dividend per Share	Total Amount
11/10/2016	11/17/2016	17,226,478	$ 0.05	$ 861,324
1/30/2017	2/06/2017	17,233,758	0.05	861,688
5/08/2017	5/15/2017	17,240,626	0.05	862,031
7/28/2017	8/04/2017	17,268,920	$ 0.05	863,446
Total				**$ 3,448,489**

FY2018

Record Date	Distribution Date	Number of Shares Outstanding on Record Date	Dividend per Share	Total Amount
11/13/2017	11/20/2017	17,284,792	$ 0.06	$ 1,037,088
1/26/2018	2/2/2018	17,317,752	0.06	1,039,065
4/25/2018	5/2/2018	17,354,005	0.06	1,041,240
7/26/2018	8/2/2018	17,405,775	$ 0.06	1,044,347
Total				**$ 4,161,740**

FY2019

Record Date	Distribution Date	Number of Shares Outstanding on Record Date	Dividend per Share	Total Amount
11/01/2018	11/08/2018	17,417,875	$ 0.06	$ 1,045,073
1/25/2019	2/1/2019	17,481,450	0.06	1,048,887
4/24/2019	5/1/2019	17,515,228	0.06	1,050,914
7/25/2019	8/1/2019	17,536,454	$ 0.06	1,052,181
Total				**$ 4,197,055**

Although dividend distributions are currently expected to continue on a quarterly basis, the Company's Board of Directors reserves the right to discontinue the dividend distribution any time.

Stock Option Plan

On February 23, 2007, the Board of Directors adopted, and the shareholders approved, the 2007 Stock Option Plan under which a total of 1,000,000 shares of common stock had been reserved for issuance. On February 25, 2014 the shareholders approved an additional 1,000,000 shares increasing the total number of shares that may be granted under the Option Plan to 2,000,000. This plan terminated in February 2017 by its term.

On December 23, 2016 the Board of Directors adopted, and on February 23, 2017 the shareholders approved, the 2017 Equity Incentive Plan under which a total of 1,000,000 shares of common stock has been reserved for issuance. This plan will terminate in December 2026.

As of August 31, 2019, employees and directors hold stock options to purchase 1,163,259 shares of common stock at exercise prices ranging from $6.75 to $34.23 per share.

The following table summarizes information about stock options:

Transactions in FY17	Number of Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life
Outstanding, August 31, 2016	947,500	$ 7.50	7.73
Granted	434,916	10.18	
Exercised	(49,642)	3.56	
Cancelled/Forfeited	(83,648)	8.68	
Outstanding, August 31, 2017	1,249,126	$ 8.51	7.74
Exercisable, August 31, 2017	401,485	$ 6.45	5.59
Vested and Expected to Vest, August 31, 2017	1,144,405	$ 8.41	7.63

Transactions in FY18	Number of Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life
Outstanding, August 31, 2017	1,249,126	$ 8.51	7.74
Granted	52,000	22.36	
Exercised	(130,006)	5.97	
Canceled/Forfeited	(30,144)	9.10	
Expired	(6,000)	5.06	
Outstanding, August 31, 2018	1,134,976	$ 9.44	7.31
Vested and Exercisable, August 31, 2018	483,696	$ 7.79	6.48
Vested and Expected to Vest, August 31, 2018	1,069,807	$ 9.35	7.26

Transactions in FY19	Number of Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life
Outstanding, August 31, 2018	1,134,976	$ 9.44	7.31
Granted	263,500	22.78	
Exercised	(166,703)	7.15	
Canceled/Forfeited	(68,514)	12.17	
Expired			
Outstanding, August 31, 2019	1,163,259	$ 12.63	7.13
Vested and Exercisable, August 31, 2019	515,394	$ 8.57	6.09
Vested and Expected to Vest, August 31, 2019	1,101,800	$ 12.39	7.07

Intrinsic Value of options outstanding and options exercisable

	Intrinsic Value of Options Outstanding	Intrinsic Value of Options Exercisable	Intrinsic Value of Options Exercised
FY17	$ 7,479,068	$ 3,232,356	$ 479,713
FY18	$ 13,064,884	$ 6,315,086	$ 1,495,313
FY19	$ 27,312,742	$ 14,194,724	$ 3,224,454

The weighted-average remaining contractual life of options outstanding issued under the 2007 and 2017 Plan was 7.13 years at August 31, 2019. The exercise prices for the options outstanding at August 31, 2019 ranged from $6.75 to $34.23 per share, and the information relating to these options is as follows:

Exercise Price		Awards Outstanding			Awards Exercisable		
Low	High	Quantity	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Quantity	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price
$ 6.75	$ 8.00	230,133	5.0 years	$ 6.85	228,133	5.0 years	$ 6.85
$ 8.01	$ 16.00	636,976	7.0 years	$ 9.96	287,261	7.0 years	$ 9.93
$ 16.01	$ 24.00	248,150	8.8 years	$ 20.66	–		–
$ 24.01	$ 34.23	48,000	9.9 years	$ 34.23	–		–
		1,163,259	7.1 years	$ 12.63	515,394	6.1 years	$ 8.57

NOTE 8 - INCOME TAXES

We utilize FASB ASC 740-10, *"Income Taxes"* which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns.

Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each year end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized. The provision for income taxes represents the tax payable for the period and the change during the period in deferred tax assets and liabilities.

The components of the income tax provision for fiscal year 2019, 2018 and 2017 were as follows:

	2019	2018	2017
Current			
Federal	$ 1,794,596	$ 2,370,955	$ 2,385,660
State	426,364	460,619	217,281
Foreign	51,285	104,377	28,103
	2,272,245	2,935,951	2,631,044
Deferred			
Federal	(140,730)	(1,698,201)	(612,629
State	(158,368)	(33,620	434,255
	(299,098)	(1,731,821)	(178,374)
Total	**$ 1,973,147**	**$ 1,204,130**	**$ 2,452,670**

A reconciliation of the expected income tax (benefit) computed using the federal statutory income tax rate to the Company's effective income tax rate is as follows for fiscal year 2019, 2018 and 2017:

	2019	2018	2017
Income tax computed at federal statutory tax rate	21.0%	25.4%	34.0%
State taxes, net of federal benefit	4.1	4.0	3.5
Meals & entertainment	0.1	0.0	0.0
Stock based compensation	(2.6)	0.5	0.0
Other permanent differences	(0.7)	1.2	(0.5)
Research and development credit	(2.3)	(2.6)	(3.6)
Domestic production activities	–	(1.8)	(2.3)
Change in deferred income taxes due to statutory rate changes	–	(14.8)	–
Change in prior year estimated taxes	(0.9)	(0.0)	(1.3)
Total	**18.7%**	**11.9%**	**29.8%**

Significant components of the Company's deferred tax assets and liabilities for income taxes for the fiscal years ended August 31, 2019 and 2018 are as follows:

	2019	2018
Deferred tax assets		
Accrued payroll and other expenses	$ 236,455	$ 187,220
Deferred revenue	55,038	34,955
Capitalized merger costs	361,103	365,801
Intellectual property	9,301	11,066
State taxes	89,537	96,730
State tax deferred	146,815	174,800
Total deferred tax assets	898,249	870,572
Less: Valuation allowance	–	–
	898,249	870,572
Deferred tax liabilities		
Property and equipment	(61,991)	(57,636)
State tax deferred	(16,471)	(10,701)
Intellectual property	(2,217,234)	(2,593,292)
Capitalized computer software development costs	(1,334,169)	(1,404,082)
Total deferred tax liabilities	(3,629,865)	(4,065,711)
Net deferred tax liabilities	**$ (2,731,616)**	**$ (3,195,139)**

We follow guidance issued by the FASB with regard to our accounting for uncertainty in income taxes recognized in the financial statements. Such guidance prescribes a recognition threshold of more likely than not and a measurement process for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. In making this assessment, a company must determine whether it is more likely than not that a tax position will be sustained upon examination, based solely on the technical merits of the position and must assume that the tax position will be examined by taxing authorities. Our policy is to include interest and penalties related to income tax expense. Interest and penalties totaled $2,531, -0-, and $-0- for fiscal year 2019, 2018, and 2017, respectively. We file income tax returns with the IRS and various state jurisdictions and India. Our federal income tax returns for fiscal year 2015 thru 2018 are open for audit, and our state tax returns for fiscal year 2013 through 2018 remain open for audit. In addition, our California tax return for the fiscal year 2007 and fiscal year 2008 remains open with regard to R&D tax credits as a result of a previous audit for which we received a letter from the California Franchise Tax Board stating that an audit will not be conducted for those years at this time; however it may be subject to future audit.

Our review of prior year tax positions using the criteria and provisions presented in guidance issued by FASB did not result in a material impact on our financial position or results of operations.

NOTE 9 – CONCENTRATIONS AND UNCERTAINTIES

Financial instruments that potentially subject the Company to concentration of credit risk consist principally of cash, cash equivalents and trade accounts receivable. The Company holds cash and cash equivalents at banks located in California, with balances that often exceed FDIC insured limits. Historically, the Company has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents. However, considering the current banking environment, the Company is investigating alternative ways to minimize its exposure to such risks. While the Company may be exposed to credit losses due to the nonperformance of its counterparties, the Company does not expect the settlement of these transactions to have a material effect on its results of operations, cash flows or financial condition. The Company maintains cash at financial institutions that may, at times, exceed federally insured limits. At August 31, 2019 the Company had cash and cash equivalents exceeding insured limits by $10,223,000.

Revenue concentration shows that international sales accounted for 34%, 39% and 38% of net sales for fiscal years 2019, 2018 and 2017, respectively. Three customers accounted for 8%, 8% (a dealer account in Japan representing various customers), and 7% of net sales for fiscal year 2019. Four customers accounted for 9% (a dealer account in Japan representing various customers), 7%, 6% and 5% of net sales for fiscal year 2018. Three customers accounted for 7% (a dealer account in Japan representing various customers), 7% and 5% of net sales for fiscal year 2017.

FY19 accounts receivable concentrations show that one customer comprised 10%, of accounts receivable as of August 31, 2019. FY18 accounts receivable concentrations show that one customer comprised 17% (a dealer account in Japan representing various customers), of accounts receivable as of August 31, 2018.

We operate in the computer software industry, which is highly competitive and changes rapidly. Our operating results could be significantly affected by our ability to develop new products and find new distribution channels for new and existing products.

The majority of our customers are in the pharmaceutical industry. During economic downturns, we have seen consolidations in the pharmaceutical industry. Although we have not seen any significant reduction in total revenues to date, our growth rate could be affected by consolidation and downsizing in the pharmaceutical industry.

NOTE 10 – SEGMENT AND GEOGRAPHIC REPORTING

We account for segments and geographic revenues in accordance with guidance issued by the FASB. Our reportable segments are strategic business units that offer different products and services.

Results for each segment and consolidated results are as follows years ended August 31, 2019, 2018 and 2017 (in thousands, because of rounding, numbers may not foot):

Year ended August 31, 2019

	Simulations Plus, Inc.	Cognigen Corporation	DILIsym	Eliminations	Total
Net Revenues	$ 19,585	$ 9,321	$ 5,065		$ 33,970
Income from operations before income taxes	$ 7,752	$ 1,481	$ 1,416		$ 10,648
Total assets	$ 38,535	$ 11,196	$ 13,168	$ (17,702)	$ 45,197
Goodwill	$ 0	$ 4,789	$ 5,598		$ 10,387
Capital expenditures	$ 39	$ 79	$ 20		$ 138
Capitalized software costs	$ 1,482	$ 114	$ 172		$ 1,768
Depreciation and Amortization	$ 1,806	$ 364	$ 580		$ 2,750

Year ended August 31, 2018

	Simulations Plus, Inc.	Cognigen Corporation	DILIsym	Eliminations	Total
Net Revenues	$ 17,553	$ 7,857	$ 4,257		$ 29,667
Income from operations before income taxes	$ 7,533	$ 1,902	$ 863		$ 10,298
Total assets	$ 38,000	$ 8,733	$ 14,248	$ (17,702)	$ 43,279
Goodwill	$ 0	$ 4,789	$ 5,598		$ 10,387
Capital expenditures	$ 65	$ 100	$ 18		$ 183
Capitalized software costs	$ 1,365	$ 625	$ 155		$ 2,145
Depreciation and Amortization	$ 1,748	$ 401	$ 572		$ 2,721

Year ended August 31, 2017

	Simulations Plus, Inc.	Cognigen Corporation	DILIsym	Eliminations	Total
Net Revenues	$ 15,600	$ 7,300	$ 1,238		$ 24,138
Income from operations before income taxes	$ 6,194	$ 1,750	$ 320		$ 8,264
Total assets	$ 33,056	$ 9,363	$ 13,794	$ (17,702)	$ 38,512
Goodwill	$ 0	$ 4,789	$ 5,598		$ 10,387
Capital expenditures	$ 48	$ 96	$ 1,384		$ 1,528
Capitalized software costs	$ 1,133	$ 219	$ 24		$ 1,376
Depreciation and Amortization	$ 1618	$ 374	$ 135		$ 2,127

In addition, the Company allocates revenues to geographic areas based on the locations of its customers. Geographical revenues for the years ended August 31, 2019, 2018 and 2017 were as follows (in thousands, because of rounding, numbers may not foot):

Year ended August 31, 2019

	North America	Europe	Asia	South America	Total
Simulations Plus, Inc.	$ 9,327	$ 5,144	$ 5,060	$ 54	$ 19,585
Cognigen Corporation	9,321	–	–	–	9,321
DILIsym Services, Inc.	3,875	685	505	–	5,065
Total	$ 22,523	$ 5,829	$ 5,565	$ 54	$ 33,971

	Year ended August 31, 2018				
	North America	Europe	Asia	South America	Total
Simulations Plus, Inc.	$ 7,826	$ 4,964	$ 4,733	$ 30	$ 17,553
Cognigen Corporation	7,857	–	–	–	7,857
DILIsym Services, Inc.	3,163	312	782	–	4,257
Total	$ 18,846	$ 5,276	$ 5,515	$ 30	$ 29,667

	Year ended August 31, 2017				
	North America	Europe	Asia	South America	Total
Simulations Plus, Inc.	$ 7,846	$ 3,826	$ 3,926	$ 1	$ 15,600
Cognigen Corporation	7,300	–	–	–	7,300
DILIsym Services, Inc.*	851	151	236	–	1,238
Total	$ 15,997	$ 3,977	$ 4,162	$ 1	$ 24,138

*DILIsym was acquired on June 1, 2017.

NOTE 11 – RELATED PARTY TRANSACTIONS

On June 1, 2017 the Company acquired DILIsym Service, Inc. As part of that agreement the Company paid $1,704,000 to former shareholders of DILIsym Services, Inc. who are currently employees of the Consolidated Company. In addition, as part of the acquisition agreement the Company owes approximately $2,260,000 of acquisition liabilities at August 31, 2018 to the former shareholders who are still employees of the Consolidated Company. One of the former shareholders of DILIsym is currently a director of Simulations Plus, under the agreement he received approximately, $29,000 and could receive up to approximately $30,000 in future earn-out payments. In September 2018, subsequent to year end under terms of the agreement the Company made payments in the amount of approximately $587,000 and $10,000, respectively to the employees and the current director. In Fiscal year 2019, under terms of the agreement the Company made payments in the amount of approximately $1,599,534 and $27,312, respectively to the employees and the current director.

NOTE 12 - EMPLOYEE BENEFIT PLAN

We maintain a 401(k) Plan for eligible employees. We make matching contributions equal to 100% of the employee's elective deferral, not to exceed 4% of the total employee compensation. We can also elect to make a profit-sharing contribution. We contributed $404,684, $326,762 and $251,899 for fiscal year 2019, 2018 and 2017, respectively.

NOTE 13 - ACQUISITION/MERGER WITH SUBSIDIARIES

DILIsym Services, Inc.

On May 1, 2017, the Company entered into a Stock Purchase Agreement (the "Stock Agreement") with DILIsym Services, Inc. ("DILIsym"). On June 1, 2016, the Company consummated the acquisition of all outstanding equity interests of DILIsym pursuant to the terms of the Stock Agreement, with DILIsym becoming a wholly owned subsidiary of the Company. We believe the combination of Simulations Plus and DILIsym provides substantial future potential based on the complementary strengths of each of the companies.

Under the terms of the Stock Agreement, as described below, the Company will pay the former shareholders of DILIsym total consideration of approximately $10,463,000.

On June 1, 2017, the Company paid the former shareholders of DILIsym a total of $4,515,982, which included a $4,000,000 initial payment and a preliminary working capital payment of $515,982. An additional working capital adjustment of $247,328 was due under the agreement and was paid subsequent in FY 2018. In December 2018, the Company paid the former shareholders of DILIsym a total of $1,000,000 under a holdback provision.

The agreement calls for earn-out payments up to an additional $5,000,000 based on a formula of pre-tax earnings over a three years period. The Earn-out liability has been recorded at fair value. Payments made under the earn-out are as follows: In September 2018, $1,556,644 was paid out under the first earn-out payment, a second earn-out payment was made in August 2019 in the amount of $1,682,329, and it is estimated that a final payment of approximately $1,761,000 will be paid in August 2020.

Under the acquisition method of accounting, the total estimated purchase price is allocated to DILIsym's tangible and intangible assets and liabilities based on their estimated fair values at the date of the completion of the acquisition (June 1, 2017). The following table summarizes the preliminary allocation of the purchase price for DILIsym:

Assets acquired, including accounts receivable of $255,000 and estimated Contracts receivable of $153,000	$	2,283,110
Developed technologies acquired		2,850,000
Estimated value of intangibles acquired (Customer Lists, trade name etc.)		2,840,000
Current liabilities assumed		(911,049)
Goodwill		5,597,950
Estimated deferred income taxes		(2,212,160)
Total Consideration	$	10,463,310

Goodwill has been provided in the transaction based on estimates of future earnings of this subsidiary including anticipated synergies associated with the positioning of the combined company as a leader in model-based drug development. Based on the structure of the transaction, the Company does not anticipate benefiting from any tax deductions in future periods for recognized goodwill.

PROFORMA INFORMATION (UNAUDITED)

Consolidated supplemental Pro Forma information

The following consolidated supplemental pro forma information assumes that the acquisition of DILIsym took place on September 1, 2015 for the income statements for the fiscal year ended August 31, 2017, and 2016. These amounts (in thousands) have been calculated after applying the Company's accounting policies and adjusting the results of DILIsym to reflect the same expenses in the fiscal year ended August 31, 2017 that were incurred in the fiscal year ended August 31, 2016. The adjustments include costs of acquisition of $620,000, and the amortization of intangibles and other technologies acquired during the merger assuming the fair value adjustments applied on September 1, 2015, together with consequential tax effects.

	(Actual) 2019	**(Actual) 2018**	**(Pro forma)* 2017**
Net Sales	$ 33,970	$ 29,667	$ 27,184
Net Income	$ 8,583	$ 8,935	$ 6,325

*Includes 3 months actual results for the period of June 1, 2017 to August 31, 2017

NOTE 14. UNAUDITED QUARTERLY FINANCIAL DATA

The following table presents selected unaudited quarterly financial data for each full quarterly period of the years ended August 31, 2019 and 2018:

Year ended August 31, 2019	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 7,536	$ 8,472	$ 9,937	$ 8,026
Gross Profit	$ 5,336	$ 6,264	$ 7,613	$ 5,735
Net Income	$ 1,536	$ 2,099	$ 2,889	$ 2,059
Earnings per share, Basic	$ 0.09	$ 0.12	$ 0.16	$ 0.12
Earnings per share, Diluted	$ 0.09	$ 0.12	$ 0.16	$ 0.11

(in 1,000's except for per share data)

Year ended August 31, 2018	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 7,069	$ 7,357	$ 8,553	$ 6,688
Gross Profit	$ 5,333	$ 5,241	$ 6,530	$ 4,568
Net Income	$ 1,716	$ 3,475	$ 2,406	$ 1,338
Earnings per share, Basic	$ 0.10	$ 0.20	$ 0.14	$ 0.08
Earnings per share, Diluted	$ 0.10	$ 0.19	$ 0.13	$ 0.07

NOTE 15 - SUBSEQUENT EVENTS

Dividend Declared

On October 14, 2019, our Board of Directors declared a quarterly cash dividend of $0.06 per share to our shareholders. The dividend was distributed on Friday, November 1, 2019, for shareholders of record as of Friday, October 25, 2019.

LIST OF SUBSIDIARIES

Cognigen Corporation, a Delaware corporation.

DILIsym Services, Inc., a Delaware corporation

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements of Simulations Plus, Inc. on Form S-8 (Nos. 333-142882, 333-197681, and 333-219446) of our report dated November 13, 2019 with respect to the consolidated financial statements of Simulations Plus, Inc. as of August 31, 2019 and 2018 and for each of the three years in the period ended August 31, 2019, included in this Annual Report on Form 10-K of Simulations Plus, Inc. for the fiscal year ended August 31, 2019.

/s/ Rose, Snyder & Jacobs LLP
Rose, Snyder & Jacobs LLP

Encino, California

November 13, 2019

RULE 13a-14(a) CERTIFICATION

SIMULATIONS PLUS, INC.
a California corporation

CERTIFICATION OF CHIEF EXECUTIVE OFFICER (Principal Executive Officer)

I, Shawn O'Connor, certify that:

1. I have reviewed this Annual Report on Form 10-K of Simulations Plus, Inc., a California corporation;

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

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

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

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

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

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

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

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

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

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

Dated: November 13, 2019

By: /s/ Shawn O'Connor
Shawn O'Connor
Chief Executive Officer
(Principal Executive Officer)

RULE 13a-14(a) CERTIFICATION

SIMULATIONS PLUS, INC.
a California corporation

CERTIFICATION OF CHIEF FINANCIAL OFFICER (Principal Financial Officer)

I, John R. Kneisel, certify that:

1. I have reviewed this Annual Report on Form 10-K of Simulations Plus, Inc., a California corporation;

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

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

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

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

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

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

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

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

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

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

Dated: November 13, 2019

By: /s/ John R. Kneisel
John R. Kneisel
Chief Financial Officer
(Principal Financial Officer)

CERTIFICATIONS PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)

In connection with the Annual Report of Simulations Plus, Inc., a California corporation (the "Company"), on Form 10-K for the year ended August 31, 2019, as filed with the Securities and Exchange Commission (the "Report"), Shawn O'Connor, Chief Executive Officer of the Company, and John R. Kneisel, Chief Financial Officer of the Company, do each hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company for the period covered by the Report.

/s/ Shawn O'Connor
Shawn O'Connor
Chief Executive Officer
November 13, 2019

/s/ John R. Kneisel
John R. Kneisel
Chief Financial Officer
November 13, 2019

(A signed original of this written statement required by Section 906 has been provided to Simulations Plus, Inc. and will be retained by Simulations Plus, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.)