**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**Washington, DC 20549**

# FORM 10-K

(Mark one)
S ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended July 31, 2013

or

£ TRANSITION REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 001-09974

# ENZO BIOCHEM, INC.

(Exact name of registrant as specified in its charter)

| New York | 13-2866202 |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |
| 527 Madison Ave. New York, New York | 10022 |
| (Address of principal executive offices) | (Zip Code) |

(212) 583-0100
(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, $.01 par value | The New York Stock Exchange |

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K
Yes S No £

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

Large accelerated filer £ Accelerated filer S Non-accelerated filer £ Smaller Reporting Company £

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act of 1934). Yes £ No S

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant was approximately $102,630,000 as of January 31, 2013

The number of shares of the Company's common stock, $.01 par value, outstanding at October 1, 2013 was 41,180,742.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held on or about January 15, 2014 are incorporated by reference into Part III of this annual report.

**TABLE OF CONTENTS**

**PART I**

Item 1. Business

**Overview**

Enzo Biochem, Inc. (the “Company” “we”, “our” or “Enzo”) is a growth-oriented integrated life sciences and biotechnology company focused on harnessing biological processes to develop research tools, diagnostics and therapeutics and serves as a provider of test services, including esoteric tests, to the medical community. Since our founding in 1976, our strategic focus has been on the development of enabling technologies in research, development, manufacture, licensing and marketing of innovative health care products, platforms and services based on molecular and cellular technologies. Our pioneering work in genomic analysis coupled with its extensive patent estate and enabling platforms have strategically positioned the Company to play an important role in the rapidly growing life sciences and molecular medicine marketplaces.

In the course of our research and development activities, we have built a substantial portfolio of intellectual property assets, comprising 145 key issued patents worldwide, and over 160 pending patent applications, along with extensive enabling technologies and platforms.

**Operating Segments**

We are comprised of three operating segments, of which the Therapeutics and Life Sciences segments have evolved out of our core competencies: the use of nucleic acids as informational molecules and the use of compounds for immune modulation and augmented by the previous acquisitions of a number of related companies. Information concerning sales by geographic area and business segments for the years ended July 31, 2013, 2012 and 2011 is located in Note 15 in the Notes to Consolidated Financial Statements.

Below are brief descriptions of each of our operating segments:

**Enzo Clinical Labs** is a regional clinical laboratory serving the New York, New Jersey and Eastern Pennsylvania medical communities. The Company believes having clinical diagnostic services allows us to capitalize first hand on our extensive advanced technological capabilities and the broader trends in predictive and personalized diagnostics. Enzo Clinical Labs offers a menu of routine and esoteric clinical laboratory tests or procedures used in general patient care by physicians to establish or support a diagnosis, monitor treatment or medication, and search for an otherwise undiagnosed condition. We operate a full-service clinical laboratory in Farmingdale, New York, a network of over 35 patient service centers throughout New York and New Jersey, a stand-alone “stat” or rapid response laboratory in New York City and a full-service phlebotomy, in-house logistics department, and information technology department.

**Enzo Life Sciences** manufactures, develops and markets products and tools to life sciences, drug development and clinical research customers world-wide and has amassed a large patent and technology portfolio. Enzo Life Sciences, Inc. is a recognized leader in labeling and detection technologies across research and diagnostic markets. Our strong portfolio of proteins, antibodies, peptides, small molecules, labeling probes, dyes and kits provides life science researchers tools for target identification/validation, high content analysis, gene expression analysis, nucleic acid detection, protein biochemistry and detection, and cellular analysis. We are internationally recognized and acknowledged as a leader in manufacturing, in-licensing, and commercialization of over 7,500 of our own products and in addition distribute over 30,000 products made by over 40 other original manufacturers. Our strategic focus is directed to innovative diagnostic platforms and high quality research reagents and kits in the primary key research areas of genomics, cellular analysis, small molecule chemistry, protein homeostasis epigenetics immunoassays and assay development.

The segment is an established source for a comprehensive panel of products to scientific experts in the fields of cancer, cardiovascular disease, neurological disorders, diabetes and obesity, endocrine disorders, infectious and autoimmune disease, hepatotoxicity and renal injury.

**Enzo Therapeutics** is a biopharmaceutical venture that has developed multiple novel approaches in the areas of gastrointestinal, infectious, ophthalmic and metabolic diseases, many of which are derived from the pioneering work of Enzo Life Sciences. Enzo Therapeutics has focused its efforts on developing treatment regimens for diseases and conditions for which current treatment options are ineffective, costly, and/or cause unwanted side effects. This focus has generated a clinical and preclinical pipeline, as well as more than 45 patents and patent applications.

The Company's primary sources of revenue have historically been from the clinical laboratory services provided to the healthcare community and product revenues and royalty and licensing of Life Sciences' products utilized in life science research. The following table summarizes the sources of revenues for the fiscal years ended July 31, 2013, 2012 and 2011 in $000's and percentages:

| Fiscal year ended July 31, | 2013 | | 2012 | | 2011 | |
|---|---|---|---|---|---|---|
| Clinical laboratory services | $ 55,889 | 59% | $ 59,403 | 58% | $ 52,762 | 52% |
| Product revenues | 32,526 | 35 | 37,722 | 37 | 41,830 | 41 |
| Royalty and license fee income | 5,292 | 6 | 5,958 | 5 | 7,437 | 7 |
| Total | $ 93,707 | 100% | $ 103,083 | 100% | $ 102,029 | 100% |

**Markets**

**Background**

Deoxyribonucleic Acid ("DNA") is the source of biological information that governs the molecular mechanisms underlying life. This information is stored in the linear sequences of nucleotides that comprise DNA. The sequence of the human genome, comprising well over 30,000 genes, has been identified by genomic research in both the public and private sectors, including the Human Genome Project. The ongoing challenge of the scientific research community is to determine the function and relevance of each gene, as well as gene to gene and gene/environment interactions. In addition, scientists are looking in detail at the proteins that are expressed by genes, their control and regulation in the cellular environment. This information will facilitate the understanding of biological mechanisms and how variations and mutations in such mechanisms may result in disease, enabling more rapid and accurate detection of specific diseases and the development of new therapeutics to treat them.

**Tools for biomedical and pharmaceutical research**

There is a large global demand by biomedical and pharmaceutical researchers for research and diagnostic tools that both facilitate and accelerate the generation of biological information. This demand can be met by gene and protein target based diagnostics for which a variety of formats, or tools, have been developed that enable researchers to study biological pathways. These tools can identify mutations in gene sequences and variations in gene expression levels that can lead to disease, or quantify biomarkers that provide insight to disease and potential therapeutic solutions. These techniques use instruments including DNA sequencing and genotyping instruments, microarrays, fluorescent microscopes, high content screening systems, flow cytometers and plate readers. Common among these instruments is the need for reagents that allow the identification, quantification and characterization, and interactions of specific genes or nucleic acid sequences, proteins, cells and other cellular structures and organelles.

We believe this market will continue to grow as a result of:

- long term commitment to research spending by academic, government and private organizations to determine the function and clinical relevance of the gene sequences and proteins that have been identified by genome research,
- development of commercial applications based on information derived from this research; and
- ongoing advancements in tools that accelerate these research and development activities.

**Clinical diagnostics**

The clinical diagnostics market has been reported by industry sources to be greater than $22 billion annually domestically and over $44 billion worldwide. It is comprised of a broad range of tests based on clinical chemistry, microbiology, immunoassays, genomics, proteomics, gene expression profiling blood banking, and cancer screening assays through histology as well as newer body fluid based approaches. Many of these tests employ traditional technologies, such as immunoassays and cell culture technologies, for the detection of diseases.

Immunoassays are based on the use of antibodies directed against a specific target, or antigen, to detect that antigen in a patient sample. Cell culturing techniques involve the growth, isolation and visual detection of the presence of a microorganism and often it's susceptibility to FDA approved drugs.

There are several drawbacks to these more traditional technologies. Immunoassays do not allow for early detection of diseases because they require minimum levels of antigens to be produced by the microorganism in order to be identified. These levels vary by microorganism, and the delay involved could be several days or several months, as seen in HIV/AIDS. Cell cultures are slow, labor intensive and not amenable to all microorganisms. For example, gonorrhea and chlamydia are difficult to culture.

Gene-based diagnostics have many advantages over the traditional technologies. Since gene-based diagnostics focus on the identification of diseases at the cellular level, they can identify the presence of the disease at its earliest stage of manifestation in the body. These tests provide results more rapidly, are applicable to a broad spectrum of microorganisms and can easily be automated in a multiplex platform.

Several advances in technology are accelerating the adoption of gene-based diagnostics in clinical laboratories. These advances include high throughput automated formats that minimize labor costs, non-radioactive probes and reagents that are safe to handle, and amplification technologies that improve the sensitivity of such diagnostics.

According to industry sources, the market for molecular diagnostic tools, assays and other products is currently more than $6 billion per year, and is acknowledged as one of the fastest growing segments in the in-vitro diagnostic industry, growing at more than twice the rate of traditional diagnostics. Contributing to this growth is, among other factors:

- the increasing number of diagnostic tests being developed from discoveries in genome research;
- advances in formats and other technologies that automate and accelerate gene-based diagnostic testing;
- growing emphasis by the health care industry on early diagnosis and treatment of disease and;
- application of gene-based diagnostics as tools to match therapies to specific patient genetics commonly referred to as pharmacogenomics or companion diagnostics.

**Therapeutics**

As science progresses, we are learning more about biochemical processes and how the cell's machinery is directed towards normal functioning of physiological, genetic and immune system pathways. Disease may result as the consequence of an inappropriate reaction in any of these systems.

In the normal physiologic functioning of the body key modulators interact with membrane-bound proteins and initiate a cascade of biochemical reactions that regulate the cell. How modulators interact with membrane-bound proteins set the stage for a variety of possible activities that the cell then controls. The membrane-bound proteins are multiligand receptors; hence the modulator(s) and their activity at a specific binding docking "station" determine the ultimate activity of the cell. This constitutes a cell signaling pathway. One of the most notable cell signaling pathways is the Wnt pathway and an associated membrane protein, LDL (low density lipoprotein) receptor-related protein LRP. Research by Enzo and others have unlocked the key to the activation/inhibition of the Wnt and/or LRP system resulting in the discovery and subsequent regulation of natural processes, such as development, cell division, and metabolic activity, among others. Manipulation of this system through small molecules, peptides, oligonucleotides or antibodies may possibly correct dysfunctional systems.

Other diseases may be the consequence of an inappropriate reaction of the body's immune system, either to a foreign antigen, such as a bacterium or virus, or, in the case of an autoimmune condition, to the body's own components. In recent years, several new strategies of medication for the treatment of immune-based diseases such as Crohn's disease, autoimmune uveitis and rheumatoid arthritis, have been developed. These treatments are all based on a systemic suppression of certain aspects of the immune system and can lead to significant side effects. Thus, there continues to be a need for a therapeutic strategy that is more specific and less global in its effect on the immune system.

Still other diseases result from either the expression of foreign genes, such as those residing in viruses and pathogenic organisms, or from the abnormal or unregulated expression of the body's own genes. In other cases, it is the failure to express, or over expression of, a gene that causes the disease. In addition, a number of diseases result from the body's failure to adequately regulate its immune system.

Advances in gene analysis have provided the information and tools necessary to develop drugs that interfere with the disease process at the genetic level. For a broad spectrum of diseases, this approach can be more precise and effective than interfering with downstream events such as protein synthesis or enzyme activation. Therapies targeting genetic processes are called gene medicines. There are two fundamental approaches to gene medicines, synthetic and genetic.

Synthetic gene medicine involves the administration of synthetic nucleic acid sequences called "oligos" that are designed to bind to, and thus deactivate, ribonucleic acid ("RNA") produced by a specific gene.

To date, this approach has demonstrated limited success. Since a single cell may contain thousands of strands of RNA, large amounts of oligos are necessary to shut down the production of unwanted proteins. Also, they are quickly metabolized or eliminated by the body. Consequently, large quantities of oligos must be delivered in multiple treatments, which can be both toxic to the body as well as costly.

Genetic medicine or gene therapy involves the insertion of a gene into a cell. The inserted gene biologically manufactures the therapeutic product within the cell on an ongoing basis. This gene may be introduced to bring about a beneficial effect or to disable a pathological mechanism within the cell. For example, the gene may be inserted to replace a missing or malfunctioning gene responsible for synthesizing an essential protein or the inserted gene may code for a molecule that would deactivate either an overactive gene or a gene producing an unwanted protein. As a permanent addition to the cellular DNA, the inserted gene produces RNA and/or proteins where needed.

A major challenge in designing gene therapy medicines has been to enable the efficient and safe delivery of the gene to the appropriate target cell. Gene delivery is often accomplished using a delivery vehicle known as a vector. A critical quality of the vector is its ability to bind to the target cell and effectively deliver, or transduce, the gene into the cell. It is also critical that the nucleic acid of the vector not produce proteins or antigens that can trigger an adverse immune response.

**Strategy**

Our objective is to be a leading developer and provider of the tools, services, and diagnostic technologies used to study and identify disease at the molecular level and to be a provider of therapeutic platforms to manage specific diseases. There can be no assurance that our objective will be met. Key elements of our strategy involving three separate platforms include our ability to:

***Maximize our resources by collaborating with others in research and commercialization activities***

We enter into research collaborations with leading academic and other research centers to augment our core expertise on specific programs.

Our clinical trial of Optiquel® is a direct result of such research collaboration. We acquired the rights and intellectual property to this candidate drug and technology intended for use in the treatment of autoimmune uveitis. Working with scientists and physicians in the United States and abroad, Enzo continued drug development to the stage of a clinical trial now being conducted in collaboration with the National Eye Institute of the National Institutes of Health in Washington DC.

We have research and clinical collaborations with other institutions including Hadassah University Medical Center in Jerusalem, Israel relating to our immune regulation technology. Through collaborations such as these and other licensing agreements we continue to develop novel therapeutics for the stimulation and enhancement of bone formation and glucose control, among others. Such products, if any, emanating from this technology could provide potential therapy for bone disorders, including bone loss, bone fractures, periodontitis, diabetes and other indications. There can be no assurance that any of these collaborative projects will be successful.

Enzo Life Sciences maintains relationships with academic and commercial groups worldwide in sourcing and commercializing high value reagents developed by leading academics.

Similarly, we may seek to fully exploit the commercial value of our technology by partnering with for-profit enterprises in specific areas in order to act on opportunities that can be accretive to our efforts in accelerating our development program.

***Apply our biomedical research technology to the clinical diagnostics market***

We have an extensive library of probes for the detection of various diseases. We have developed a standardized testing format that can permit multiple diagnoses to be performed on the same specimen thereby potentially reducing the need for multiple physician visits to obtain additional samples.

***Exploit our marketing and distribution infrastructure***

Enzo Life Sciences has developed its sales and marketing infrastructure to directly service its end users, while simultaneously positioning the Company for targeted product line expansion. Our global sales, marketing, manufacturing, product development and distribution infrastructure, have now been integrated and consolidated into a single global business. Enzo Life Sciences operates, under its own name, worldwide through wholly owned subsidiaries (in USA, Switzerland, Benelux, Germany, and the UK), a branch office in France and a network of third party distributors in most other significant markets worldwide.

***Expand our collaborations with major life sciences companies***

We intend to seek opportunities to secure strategic partnerships and assert our intellectual property estate with multiple market participants. Further, we will look to advance proprietary business opportunities.

The Company has a license agreement with QIAGEN Gaithersburg Inc. ("Qiagen") that began in 2005, whereby the Company earns quarterly running royalties on the net sales of Qiagen products subject to the license until the expiration of the patent on April 24, 2018. In the license agreement, Qiagen was granted a world-wide, non-exclusive license to the Company U.S. Patent number 6,222,581, which is related to the use of a methodology called "hybrid-capture" in which certain nucleic acid probes are hybridized to target nucleic acids and then captured indirectly on a solid surface. The resulting nucleic acid hybrids are then detected by antibodies conjugated to signal-generating molecules which produce an amplified signal allowing for more sensitive detection of the resultant hybrids. This platform is one of the most desirable formats for the detection of nucleic acids in a reliable and economic manner, and has formed the basis for one of the most commonly ordered genomic-based assays. See Note 12 to the Notes to Consolidated Financial Statements.

***Apply our innovative technology to a variety of diseases mediated by cell signaling pathways, by the immune system, or, in advanced cases, gene therapy.***

We believe our core technologies have broad diagnostic and therapeutic applications. We have focused our efforts on discovering how best to correct pathologies associated with bone or metabolic control, and immune-mediated diseases. Although the cause of disorders such as Crohn's disease, autoimmune uveitis and non-alcoholic steatohepatitis (NASH) remains unknown, various features suggest immune system involvement in their pathogenesis.

We continue to test technologies we believe can serve as enabling platforms for developing medicines that genetically target and inhibit viral functions, as well as medicines that regulate the immune response. In addition to such therapeutic products, we continue to capitalize on our nucleic acid labeling, target and signal amplification, and detection technologies and intellectual property to develop diagnostic and monitoring tests for various diseases.

***Expand and protect our intellectual property estate***

Since our inception, we have followed a strategy of creating a broad encompassing patent position in the life sciences and therapeutics areas. We have made obtaining patent protection a central strategic policy, both with respect to our proprietary platform technologies and products, as well as broadly in the areas of our research activities. During Fiscal 2013 we were issued 32 patents and expanded our patent estate in the area of nucleotides, amplification, labeling and detection, among others.

**Core Technologies**

We have developed a portfolio of proprietary technologies with a variety of research, diagnostic and therapeutic applications.

***Diagnostic Technology Platform***

**Gene analysis technology**

All gene-based testing is premised on the knowledge that DNA forms a double helix comprised of two complementary strands that match and bind to each other. If a complementary piece of DNA (a probe) is introduced into a sample containing its matching DNA, it will bind to, or hybridize, to form a double helix with that DNA. Gene-based testing is carried out by:

- amplification of the target DNA sequence (a process that is essential for the detection of very small amounts of nucleic acid);
- labeling the probe with a marker that generates a detectable signal upon hybridization;
- addition of the probe to the sample containing the DNA; and
- binding or hybridization of the probe to the target DNA sequence, if present, to generate a detectable signal.

We have developed a broad technology base for the labeling, detection, amplification and formatting of nucleic acids for gene analysis which is supported by our significant proprietary position in these fields.

**Amplification**

In the early stages of infection, a pathogen may be present in very small amounts and consequently may be difficult to detect. Using DNA amplification, samples can be treated to cause a pathogen's DNA to be replicated, or amplified, to detectable levels. We have developed a proprietary amplification process for multicopy production of nucleic acid, as well as proprietary techniques for amplifying the signals of our probes to further improve sensitivity. Our amplification technologies are particularly useful for the early detection of very small amounts of target DNA. We have also developed isothermal amplification procedures that can be performed at constant temperatures, unlike polymerase chain reaction (PCR) the most commonly used method of target nucleic acid amplification. These platform technologies could thus potentially lead to assays with advantages over PCR-based tests which require expensive heating and cooling systems or specialized heat-resistant enzymes. Moreover, our AmpiProbe™ Nucleic Acid Amplification Platform, because of the reduced amount of starting material needed for analysis, may lead to a next-generation of molecular-based diagnostics that can impart higher sensitivity at lower cost than currently available assays.

**Non-radioactive labeling and detection.** Traditionally, nucleic acid probes were labeled with radioactive isotopes. However, radioactively labeled probes have a number of shortcomings. They are unstable and consequently have a limited shelf life. They are potentially hazardous, resulting in restrictive licensing requirements and safety precautions for preparation, use and disposal. Finally, radioactive components are expensive. Our technologies permit gene analysis without the problems associated with radioactively labeled probes and are adaptable to a wide variety of formats.

**Formats.** There are various processes, or formats, for performing probe-based tests. In certain formats, the probe is introduced to a target sample affixed to a solid matrix; in others the probe is combined with the sample in solution (homogeneous assay). Solid matrix assays include: in situ assays in which the probe reaction takes place directly on a microscope slide; dot blot assays in which the target DNA is fixed to a membrane; and microplate and microarray assays in which the DNA is fixed on a solid surface, and the reaction can be quantified by instrumentation.

***Therapeutic Platform Development*** **Cell Signaling Pathway**

One area of Enzo's therapeutic platform development is related to the development of pharmaceutical agents that affect protein-protein interactions. Over the past several years, our scientists and collaborators have unlocked the secrets of a major cell signaling pathway thus producing a means to modify biologic activity in a number of physiological systems.

Further investigation into the design and control of this system has allowed our scientists and their collaborators to determine the structure of key regulatory proteins and to identify active sites that can then become targets for Enzo's proprietary technology generating system. Our technology is capable of generating active compounds that range from orally delivered small molecules to peptides, oligonucleotides or antibodies. We have performed pioneering work on the structure and function of LRP and its ligands, developed a screening technology to identify active compounds, and have synthesized proprietary molecules capable of producing biological effects in cell-based systems and animal models of disease. Specifically, this system allows the Company to successfully:

- generate biological, genetic, and structural information concerning LRP;
- determine the structure of LRP docking sites of its ligands;
- identify the functionally important residues via site-directed mutagenesis;
- build the fine structure map and employ it as the basis for virtual screening;

- show that compounds specifically bind to wild type LRP5, but not to mutated LRP5;
- generate a cell-based assay capable of identifying active compounds; and
- synthesize proprietary molecules that are active in animal models of disease.

Through this novel, proprietary, functional screening system, we have identified small molecules capable of reversing sclerostin-mediated inhibition of Wnt signaling. Preclinical animal studies with several candidate lead compounds produced the following results:

- significant increases in total and femoral bone density through new bone formation;
- significant reduction in alveolar bone loss; and
- significant reduction in bone resorption.

The anabolic induction of new bone formation and prevention of bone loss by our small molecule compounds may promise new paths for the treatment of osteoporosis. In addition, our proprietary technology has enabled the generation of novel chemical entities that have significant glucose lowering activity. These effects are separate from its effects on bone metabolism indicating a specificity of action conferred by the interaction of a particular compound with the cell signaling pathway. Therefore, this approach may be broadly applicable to the generation of therapeutic drug candidates for multiple indications.

**Immune Regulation**

*Oral Immune Regulation.* We continue to explore a novel therapeutic approach based on immune regulation. Our immune regulation technology seeks to control an individual's immune response to a specific antigen in the body. An antigen is a substance that the body perceives as foreign and, consequently, against which the body mounts an immune response. This platform technology is being developed as a means to manage immune-mediated diseases, such as autoimmune uveitis and Crohn's disease.

We have developed an immunomodulator agent EGS21 as a potential therapeutic for treating immune mediated disorders. EGS 21 is a glycolipid that has been shown by our scientists and collaborators to act as an anti-inflammatory agent in animal model systems and is being evaluated as a drug candidate in the treatment of various immune mediated diseases.

**Gene Regulation**

We have developed an approach to gene regulation known as genetic antisense or antisense RNA. Our technology involves the introduction into cellular DNA of a gene that codes for an RNA molecule that binds to, and thus deactivates, RNA produced by a specific gene. To deliver our antisense gene to the target cell, in a process called transduction, we have developed proprietary vector technology.

We believe, though there can be no assurance, that our vector technology has broad applicability in the field of gene medicine. This can be attributed to the following properties of our construct:

- the viral promoters are inactivated;
- insertional gene activation is prevented – a major safety factor;
- chromosomal integration; and
- nuclear localization.

In summary, we have developed proprietary technologies in the areas of cell signaling, immune modulation and gene regulation (genetic antisense RNA) that we are using as platforms for a portfolio of novel therapeutics.

There can be no assurance that we will be able to secure patents or that these programs will be successful. The potential therapies we are developing could be used, if successful for the treatment of a variety of diseases, including osteoporosis, osteonecrosis and other bone pathologies, diabetes, autoimmune uveitis and inflammatory bowel disease, including Crohn's disease and ulcerative colitis, among others.

**Products and Services**

We are applying our core technologies to develop novel therapeutics as well as research tools for the life sciences and clinical diagnostics markets. In addition, we provide clinical laboratory services to physicians and other health care providers in the New York, New Jersey and Eastern Pennsylvania medical communities.

**Research Products**

We are organized to lead in the development, production, marketing and sales of innovative life science research reagents worldwide based on over 30 years of experience in building strong international market recognition, implementing outstanding operational capabilities, through two main channels to market:

***Enzo Life Sciences – "Scientists enabling Scientists"***

Enzo Life Sciences is a positioned as a leading manufacturer and supplier of high quality reagents, kits and products supplied to customers in Life Sciences Research, Clinical Research and Drug Development. With direct sales operations in US, Switzerland, Germany, UK, France and Benelux, Enzo Life Sciences also supports its 7,000 products through a global network of dedicated distributors.

***Axxora.com –"The Reagents Marketplace", Thousands of Reagents, One Marketplace*** Axxora.com is a proven distribution platform for original manufacturers of innovative research reagents. An increasing number of researchers use our unique marketplace to instantly connect with over 40 specialty manufacturers and gain access to over 30,000 products. Purchasing groups from universities, research institutes, biotech and pharmaceutical companies utilize this extensive catalog to source research reagents and conveniently consolidate orders.

The products supplied by Enzo Life Sciences include small molecules, proteins, antibodies, peptides, probes, assay kits and custom services. Our comprehensive portfolio of high quality reagents and kits in key research areas are sold to scientific experts in the following fields:

Adipokines
Antibiotics
Apotosis/Cell Death
Biologically Active Peptides
Bone Metabolism
Cancer Research
Cell Death
Cell Cycle
Chemokines/Cytokines
Cytoskeletal Research
Dependence Receptors
DNA Fragmentation/Damage/Repair
DNA Regulation
Epigenetics
FISH
Growth Factors/Cytokines
Hypoxia
Immunology
Viral Signaling
Inflammation/Innate Immunity
Interferons
In Vitro Toxicology
Kinases/Inhibitors
Leukotrienes/Prostaglandins/Thromboxanes
Microarray Labeling
Multidrug Resistance
Natural Products/Antibiotics
Neuroscience
Nitric Oxide Pathway
Nuclear Receptors
Oxidative Stress
Protein Aggregation
Proteosome/Ubiquitin
Receptors
Signal Transduction
Stem Cell/Cell Differentiation
Stress Proteins/Heat Shock Proteins
Toxicology
TNF/TNF Receptor Superfamily
Transcription Factors

Enzo Life Sciences is organized to promote and market its products and brands under its own name, building on a foundation of the brands it has acquired or developed previously:

**Enzo** The original Enzo brand products and technologies are primarily focused in the areas of microarray analysis, gene regulation and gene modification. Patented Enzo technologies and products are recognized as key tools in non-radioactive gene and protein labeling.

**Alexis** The Alexis brand provides recognition in producing and commercializing innovative high quality reagents and as an established source for a comprehensive panel of products in many key research areas including the fields of cell death, nitric oxide, and obesity/adipogenesis.

**Biomol International** The Biomol International brand provides global recognition in the cellular biochemistry segment with an emphasis on areas related to protein post-translational modification, be it by ubiquitin or the ubiquitin-like proteins, acetylation, methylation, phosphorylation, sulphation, or glycolsylation.

**Assay Designs** The Assay Designs brand emphasizes our immunoassay development capability in the fields of inflammation, steroids and hormones, and cell signaling.

**Stressgen** The Stressgen brand is focused exclusively on the fields of the heat shock and cell stress.

Enzo Life Sciences through its selective new product development programs is now entering new markets in the fields of Cellular Analysis and Protein Aggregation detection. As part of this introduction, we established new product lines to increase recognition of our products, such as the Cellestial® range of fluorescent dyes and kits, and ProteoStat® protein aggregation detection line of products. We are also launching certain products, particularly new drug development assays and immunoassay kits developed or acquired through our business collaborators.

In Fiscal 2012 the Company created a five year branding plan that would provide more emphasis around the Enzo Life Sciences brand, which currently encompasses the acquired brands, and over a five (5) year period reduce the emphasis of the acquired brands, Alexis, Biomol International, Assay Designs and Stressgen. The Company intends to maintain the rights to the acquired brands which have long product history. The Company believes the emphasis on the Enzo Life Sciences brand will result in stronger and clearer brand awareness and allow the Company to execute the sale of higher value products and promote more products into the drug development, clinical research and diagnostic markets.

**Therapeutic Development Programs**

We have a number of therapeutic products in various stages of development that are based on our proprietary platform technologies. Our therapeutic programs are described below.

**Autoimmune Uveitis**

Autoimmune uveitis, which results from inflammation of a part of the eye known as the uvea, is believed to result from an immune reaction to antigens in the eye, specifically the S-antigen and the interphotoreceptor retinoid-binding protein (IRBP).

There is no known cure for uveitis, which in the United States, according to the American Uveitis Society, is newly diagnosed in approximately 38,000 people every year.

Enzo acquired the rights and intellectual property to a candidate drug and technology intended for use in the treatment of uveitis. The drug is the result of a discovery by scientists at the eye clinic of the Ludwig Maximilians University in Munich, Germany, who found a small peptide that when fed to rats with experimental allergic uveitis promoted their recovery. Based on favorable preclinical studies, the developers conducted an open, pilot Phase I clinical trial in Germany with encouraging results.

Based on the results from the German study, we entered into a Cooperative Research and Development Agreement (CRADA) with the National Eye Institute (NEI), part of the National Institutes of Health ("NIH"), for further development of our candidate compound Optiquel® for the treatment of autoimmune uveitis. In October 2010, we announced the initiation of a human clinical trial. Currently, patients have been enrolled and are being treated. Under the terms of the CRADA, the NEI and Enzo will share the development costs of the studies and Enzo will supply its proprietary compound, Optiquel™. The agreement additionally includes non-clinical research focusing on the use of various compounds that may serve to enhance the immune mediated oral tolerance response to specific antigens. Such research may be applicable across the entire spectrum of the Company's immune regulation platform. The clinical trial is currently ongoing, and patients are being monitored, at the NEI to assess the safety and efficacy of Optiquel®. The study is designed as a randomized, double-masked, placebo-controlled proof-of-concept study with a long-term follow-up.

We previously had filed with the regulatory authorities in Europe, and Optiquel™ has been granted orphan status under European regulations. We may apply for the same in the U.S. since Orphan status designation can confer both financial and marketing benefits.

**Inflammatory bowel diseases**

We believe Alequel™, Enzo's proprietary candidate drug based on our immune regulation technology may be used to treat inflammatory bowel disease (IBD), including ulcerative colitis and Crohn's Disease. According to the Crohn's and Colitis Foundation, approximately one million people in the United States suffer from IBD. Although the cause of these disorders remains unknown, various features suggest immune system involvement in their pathogenesis.

Patients are managed during short-term episodes through the use of anti-inflammatory medications, or immunosuppressants, which provide symptomatic relief over short periods of time, but do not provide a cure. These drugs are all based on a generalized suppression of the immune response and are non-specific. As such, they have considerable side effects and may make the body more prone to infection, lymphoma, or other diseases.

*Alequel*™ is an individualized protein-product mixture produced from autologous tissue extracted during a routine colonoscopy. The Enzo protein extract is administered to the patient orally. Clinical results indicated that the study met its primary and secondary endpoints. Although not statistically significant, the results indicated that patients receiving Alequel™ achieved improved rates of clinical remission compared with the placebo group (39% vs. 22%), clinical response (50% vs. 30%) and improved quality of life in the drug study group compared to placebo. No treatment-related adverse events were noted. Thus, we conclude that Alequel™ may be a safe and effective method for treatment of patients with moderate to severe Crohn's disease.

**Osteoporosis (and certain bone disorders) and Diabetes**

We have a number of compounds in preclinical development that could provide therapy for treating bone disorders including osteoporosis, bone loss, fractures, abnormalities, diseases, and other applications. These candidate compounds were identified through an innovative approach, combining structural biology, computational screening, mutational analyses and biological in vitro assays, followed by validation in animal model systems.

Enzo-D58 is one of several compounds found to induce new bone formation in mouse calvaria when injected subcutaneously. When delivered orally the candidate compound was shown to prevent alveolar bone loss in a periodontitis-induced rat model.

One of the most challenging problems in clinical dentistry is the loss of alveolar bone. Alveolar bone loss is characterized by the reduction in height and volume of the maxillary and mandibular bones that underlie and support the teeth. The primary causes of alveolar bone loss are periodontitis and tooth loss, although osteoporosis may also contribute. The lack of an effective treatment for periodontal bone loss has encouraged the continued search for a successful therapeutic approach.

Our preliminary results which were presented at the annual meeting of the American Society for Bone and Mineral Research 2007 suggest that Enzo-D58 may be effective in preventing alveolar bone loss. We have continued this effort and have synthesized and developed novel compounds that appear to be active in standard animal models which assess bone density. We continue to develop these drug candidates and progress them along the drug development continuum.

In addition, we and our collaborators have investigated the biochemical pathways involved in glucose homeostasis. Using animal genetic models, and structural and computational biology we have been able to decipher some of the complex cellular machinery that controls glucose, synthesize novel entities that interact at key targets and test them in standard animal models of diabetes. We continue to explore this very exciting line of research and continue activities geared toward the development of potential therapeutics for diabetes with novel mechanisms of action.

**Clinical Laboratory Services**

We operate a regional clinical laboratory that offers extensive diagnostic services to the New York, New Jersey and Eastern Pennsylvania medical communities. Our clinical laboratory testing is utilized by physicians as an essential element in the delivery of healthcare services. Physicians use laboratory tests to assist in the detection, diagnoses, evaluation, monitoring and treatment of diseases and other medical conditions. Clinical laboratory testing is generally categorized as clinical testing and anatomic pathology testing. Clinical testing is performed on body fluids, such as blood and urine. Anatomic pathology testing is performed on tissues and other samples, such as human cells. Most clinical laboratory tests are considered routine and can be performed by most commercial clinical laboratories. Tests that are not routine and that require more sophisticated equipment and highly skilled personnel are considered esoteric tests and may be performed less frequently than routine tests.

We offer a comprehensive and broad range of routine and esoteric clinical laboratory tests or procedures. These tests are frequently used in general patient care by physicians to establish or support a diagnosis, to monitor treatment or medication levels, or search for an otherwise undiagnosed condition.

Our full service clinical laboratory in Farmingdale, New York contains an infrastructure that includes comprehensive information technology applications, logistics, client service and billing departments. Also, we have a network of over thirty strategically located patient service centers and a full service phlebotomy department. Patient service centers collect from patients the specimens as requested by physicians. We also operate a fully equipped STAT laboratory in New York City. A “STAT” lab is a laboratory that has the ability to perform certain routine tests quickly and report results to the physician immediately.

Patient specimens are delivered to our laboratory facilities primarily by our logistics department accompanied by a test requisition form. These forms, which are completed by the ordering physician, indicate the tests to be performed and demographic patient information in most instances utilizing EnzoDirect™, our proprietary computer-based ordering and results delivery system. Once the information is entered into the laboratory computer system the tests are performed on the corresponding laboratory testing instrumentation and the results are delivered primarily through an interface from the laboratory testing instrumentation or in some instances, manually into the laboratory computer system. Most routine testing is completed by early the next morning, and test results are reported to the ordering physician.

These test results are either reported electronically via our EnzoDirect™ system or delivered by our logistics department directly to the ordering physicians’ offices. Physicians who request that they be called with a particular result are so notified by our customer service personnel.

For fiscal years ended July 31, 2013, 2012 and 2011, respectively, approximately 59%, 58% and 52% of the Company’s revenues were derived from the clinical laboratory. At July 31, 2013 and 2012, respectively, approximately 60% and 55% and of the Company’s net accounts receivable were derived from its clinical laboratory business. The Company believes that the concentration of credit risk with respect to the Clinical Labs accounts receivable is mitigated by the diversity of its third party payers that insure individuals.

To reduce risk, the Company routinely assesses the financial strength of these payers and, consequently, believes that its accounts receivable credit risk exposure, with respect to these payers, is limited. While the Company also has receivables due from the Federal Medicare program, the Company does not believe that these receivables represent a credit risk since the Medicare program is funded by the federal government and payment is primarily dependent on our submitting the appropriate documentation.

Revenues, net of contractual adjustment, from direct billings under the Federal Medicare program during the years ended July 31, 2013, 2012 and 2011 were approximately 22%, 21% and 22% respectively, of the clinical laboratory segment's total revenue. We estimate contractual adjustment based on significant assumptions and judgments, such as the interpretation of payer reimbursement policies which bears the risk of change. The estimation process is based on the experience of amounts approved as reimbursable and ultimately settled by payers, versus the corresponding gross amount billed to the respective payers. The contractual adjustment is an estimate that reduces gross revenue, based on gross billing rates, to amounts expected to be approved and reimbursed.

Gross billings are based on a standard fee schedule we set for self-payers, all third party payers, including Medicare, health maintenance organizations ("HMO's) and managed care providers. We adjust the contractual adjustment estimate quarterly, based on our evaluation of current and historical settlement experience with payers, industry reimbursement trends, and other relevant factors. The other relevant factors that affect our contractual adjustment include the monthly and quarterly review of: 1) current gross billings and receivables and reimbursement by payer, 2) current changes in third party arrangements, and 3) the growth of in-network provider arrangements and managed care plans specific to our Company. The clinical laboratory industry is characterized by a significant amount of uncollectible accounts receivable related to the inability to receive accurate and timely billing information in order to forward it on to the third party payers for reimbursement, and the inaccurate information received from the covered individual patients for unreimbursed unpaid amounts. Our provision for uncollectible accounts receivable is within historical expectations.

Other than the Medicare program, revenues from United Healthcare of New York, Inc. represented approximately 13%, 21% and 22% of the Clinical Labs segment's net revenue for the fiscal year ended July 31, 2013, 2012 and 2011, respectively. Another third party provider represents 9%, 13% and 11% of the Clinical Labs segment's net revenue for the fiscal years ended July 31, 2013, 2012 and 2011, respectively. Billing for laboratory services is complicated. Depending on the billing arrangement and applicable law, we must bill various payers, such as patients, insurance companies and the Federal Medicare Program, all of which have different requirements. In both New York and New Jersey, the law prohibits the Company from billing the ordering physician. Compliance with applicable laws and regulations as well as, internal compliance policies and procedures adds further complexity to the billing process. We depend on the ordering physician to provide timely, accurate billing demographic and diagnostic coding information to us. Additional factors complicating the billing process include:

- pricing differences between our standard gross fee schedules and the reimbursement rates of the payers;
- disputes with payers as to which party is responsible for payment; and
- disparity in coverage and information requirements among various payers.

We believe that most of our bad debt expense is primarily the result of inaccurate billing information on requisitions received from the ordering physician. In addition, the bad debts includes the balances, after receipt of the approved settlements from third party payers for the insufficient diagnosis information received from the ordering physician, which result in denials of payment and the uncollectible portion of receivables from self payers, including deductibles and copayments, which are subject to credit risk and patients' ability to pay. We perform the requested tests and report test results regardless of whether the billing or diagnostic coding information is inaccurate or missing. We subsequently attempt to contact the ordering physician to obtain and rectify incorrect billing information.

Missing or inaccurate information on the requisitions adds complexity to and may slow the billing process, creates backlogs of unbilled requisitions, and generally decreases the collectability and increases the aging of accounts receivable. When all issues relating to the missing or inaccurate information are not resolved in a timely manner, the related receivables are fully reserved to the allowance for doubtful accounts or allowances for contractual adjustments or written off.

We incur significant additional costs as a result of our participation in Medicare, as billing and reimbursement for clinical laboratory testing is subject to considerable and complex and stringent federal and state regulations including those relating to coverage, billing and reimbursements. Future changes in regulations could further complicate our billing and increase our billing expenses.

These additional costs include those related to: (1) complexity added to our billing processes and change our reimbursements; (2) training and education of our employees and customers; (3) compliance and legal costs; and (4) costs related to, among other factors, medical necessity denials and advance beneficiary notices. The Centers for Medicare & Medicaid Services, or CMS (formerly the Health Care Financing Administration), establishes procedures and continuously evaluates and implements changes in the reimbursement process.

The established Medicare reimbursement rate for clinical laboratory services has been reduced by the Federal government in a number of instances over the past several years. In March 2010, U.S. federal legislation was enacted to reform healthcare. The legislation provides for reductions in the Medicare clinical laboratory fee schedule of 1.9% for five years beginning in 2010 and also includes a productivity adjustment which reduces the Consumer Price Index (“CPI”) market basket update beginning in 2011. Based on these calculations, the Medicare Fee Schedule was reduced in calendar year 2011 by 1.75%, increased in calendar year 2012 by 0.65%, and decreased in calendar year 2013 by 2.95%. Future reductions/increases may occur depending on percentage changes in the CPI-U. In connection with recent government sequestration Medicare reimbursement rate were further reduced by 2% in April 2013.The legislation imposes an excise tax on the seller for the sale of certain medical devices in the United States, including those purchased and used by laboratories, beginning in 2013. The legislation establishes the Independent Payment Advisory Board (“IPAB”), which will be responsible, beginning in 2014, annually to submit proposals aimed at slowing Medicare cost growth while preserving quality.

If the projected growth in per capita Medicare costs exceeds a specified target level, the IPAB must submit proposals to reduce or eliminate the difference. For calendar years 2015 through 2019, the target growth rate is the average of the increases in the consumer price index and the medical consumer price index; for 2020 and thereafter, the target growth rate is the rate of increase in gross domestic product per capita plus one percent point. If it is necessary for the IPAB to submit proposals, they will automatically be implemented unless Congress enacts alternative proposals that achieve the same savings targets. We could experience a significant decrease in revenue from Medicare as a result of this legislation, which could have a material adverse effect on us.

**Research and Development**

Our principal research and development efforts are directed toward developing innovative new clinical research and diagnostic platforms, and selective expansion of our research product lines, given our increased manufacturing, distribution capability following the acquisitions of Axxora, Biomol International, and Assay Designs. We have developed our core research expertise in the life science field as a result of over 30 years of dedicated focus in this area. We conduct our research and other product development efforts through internal research and collaborative relationships.

In the fiscal years ended July 31, 2013, 2012 and 2011, the Company incurred costs of approximately $3.9 million, $6.3 million and, $7.8 million, respectively, for research and development activities. During fiscal 2013, the Company’s research and development program was refocused to areas that had greater opportunity to maximize revenues.

**Internal Research Programs**

Our professional staff, including 57 with post graduate degrees, performs our internal research and development activities. Our product development programs incorporate various scientific areas of expertise, including recombinant DNA, monoclonal antibody development, enzymology, microbiology, biochemistry, molecular biology, organic chemistry, and fermentation. In addition, we continuously review in-licensing opportunities in connection with new technology.

**External Research Collaborations**

We have and continue to explore collaborative relationships with prominent companies and leading-edge research institutions in order to maximize the application of our technology in areas where we believe such relationship will benefit the development of our technology.

**Sales and Marketing**

Our sales and marketing strategy for Enzo Life Sciences is to sell our life science products through: (i) direct sales to end-users under the Enzo Life Sciences name, with direct recognition to our acquired brands (ii) direct sales to end users under the Axxora electronic market place name (iii) supply agreements with manufacturers and (iv) distributors in major geographic markets. We operate with an understanding of local markets and a well-functioning distribution network system across the globe. Scientists around the world who recognize the brands (Alexis, Assay Designs, Biomol, Enzo and Stressgen) now receive products directly from Enzo Life Sciences where we are recognized for innovative high quality products, supported directly by our qualified technical staff. We sell the same products through our Axxora electronic market place which is also the source for life science research reagents from over 40 original manufacturers. Our direct marketing and sales network includes fully-owned subsidiaries (USA, Switzerland, Germany, Benelux, and UK), a branch office in France and a network of third party distributors in most other significant markets worldwide.

For Enzo Clinical Labs, we focus our sales efforts on obtaining and retaining profitable accounts. We market the clinical laboratory services to a broad range of ordering physicians in the metro New York, New Jersey and Eastern Pennsylvania region through our direct sales force who are supported by customer service and patient service representatives. We monitor and where appropriate, change the service levels and terminate ordering physician accounts that are not profitable. We are focusing our efforts to attract and retain clients who participate with the providers with whom we have regional contracts and are consistently looking to add higher value molecular and esoteric testing, both internally developed and with partners, to our menu to assist sales in new account penetration as well as to improve our level of service to existing clients

**Distribution Arrangements**

We also distribute our life science products internationally through a network of distributors. Through these arrangements, we are able to leverage the established marketing and distribution infrastructure of these companies in certain market places.

**Competition**

We compete with other life science and biotechnology companies, as well as pharmaceutical, chemical and other companies. Competition in our industry is intense. Many of these companies are performing research targeting the same technology, applications and markets. Many of these competitors are significantly larger than we are and have more resources than we do. The primary competitive factors in our industry are the ability to create scientifically advanced technology, offer innovative products at the forefront of technological development to targeted market segments, successfully develop and commercialize products on a timely basis, establish and maintain intellectual property rights and attract and retain a breadth and depth of human resources.

Our clinical laboratory services business competes with numerous national, regional, and local entities, some of which are larger than we are and have greater financial resources than we do. Our laboratory competes primarily on the basis of the quality and specialized nature of its testing, reporting and information services, its reputation in the medical community, its reliability and speed in performing diagnostic tests, and its ability to employ qualified laboratory personnel.

**Intellectual Property**

We consider our intellectual property program to be a key asset and a major strategic component to the execution of our business strategy. A broad portfolio of issued patents and pending patent applications supports our core technology platforms. Our policy is to seek patent protection for our core technology platforms, as well as for ancillary technologies that support these platforms and provide a competitive advantage.

At the end of fiscal 2013 we owned or licensed over 140 patents relating to products, methods and procedures resulting from our internal or sponsored research projects. There can be no assurance that patents will be issued on pending applications or that any issued patents will not be challenged (see Item 3, Legal Proceedings), or that they will have commercial benefit. We do not intend to rely on patent protection as the sole basis for protecting our proprietary technology. We also rely on our trade secrets and continuing technological innovation. We require each of our employees to sign a confidentiality agreement that prohibits the employee from disclosing any confidential information about us, including our technology or trade secrets.

Our intellectual property portfolio can be divided into patents that provide claims in three primary categories, as described below:

**Nucleic Acid Chemistry**

We currently have broad patent coverage in the area of nucleic acid chemistry. We have done extensive work on the labeling of nucleic acids for the purpose of generating a signal that dates back over twenty years. Enzo has multiple issued patents covering the modification of nucleic acids at their sugar and phosphate sites. The claims contained in these patents cover products that incorporate a signaling moiety into a nucleic acid attached to a sugar or phosphate for the purpose of nucleic acid detection or quantification, including sequencing and real time nucleic acid amplification. Enzo also has patents directed to proprietary dyes that may be used to label the sugar, base or phosphate positions of nucleic acids.

**Signal Delivery**

We also have a long history of innovation in the area of analyte detection using non-radioactive signaling entities. At the signaling entity itself, there are several Enzo patents that cover the formation of this structure. A patent which was allowed in 2006 covers the attachment of signaling molecules through the phosphate moiety of a nucleic acid, which is how the signal-generating enzyme is bound.

**Nucleic Acid Analysis Format**

We also have patents with issued claims covering the use of arrays of single-stranded nucleic acids fixed or immobilized in hybridizable form to a non-porous solid support. These patents cover any product that uses arrays of nucleic acids for molecular analysis.

In some instances, we may enter into royalty agreements with collaborating research parties in consideration for the commercial use by us of the developments of their joint research. In other instances the collaborating party might obtain a patent, but we receive the license to use the patented subject matter.

In such cases, we will seek to secure exclusive licenses. In other instances, we might have an obligation to pay royalties to, or reach a royalty arrangement with, a third party in consideration of our use of developments of such third party.

**REGULATION AFFECTING OUR BUSINESSES**

**Clinical Laboratory**

The clinical laboratory industry is subject to significant federal and state regulation, including inspections and audits by governmental agencies. Governmental authorities may impose fines, criminal penalties or take other actions to enforce laws and regulations, including, but not limited to, revocation of a clinical laboratory's federal certification to operate a clinical laboratory. Changes in regulation may also increase the cost of performing clinical laboratory tests, increase administrative requirements, or decrease the amount of reimbursement. Our clinical laboratory and (where applicable) patient service centers are licensed and accredited by the appropriate federal and state agencies.

CLIA (The Clinical Laboratory Improvement Act of 1967, and the Clinical Laboratory Improvement Amendments of 1988) regulates virtually all clinical laboratories. Among other things, CLIA requires certification by the federal government and compliance with various operational, personnel and quality requirements intended to ensure that their clinical laboratory testing services are accurate, reliable and timely. CLIA does not preempt state laws that are more stringent than federal laws. Many clinical laboratories must meet other governmental standards, undergo proficiency testing and inspections. Clinical laboratory certificates or licenses are also required by various state and local laws.

CLIA places all tests into one of three categories of complexity (waived, moderate complexity and high complexity) and establishes varying requirements depending upon the complexity category of the test performed. A laboratory that performs high complexity tests must meet more stringent requirements than a laboratory that performs only moderate complexity tests, while those that perform only waived tests may apply for a certificate of waiver from most CLIA requirements. Our facility is certified to perform high complexity tests. In general, regulations promulgated by the United States Department of Health and Human Services ("HHS") require laboratories that perform high or moderate complexity tests to implement systems that ensure the accurate performance and reporting of test results, establish quality control and quality assurance systems, ensure that personnel meet specified standards, conduct proficiency testing by approved agencies, and undergo biennial inspections, among other requirements.

Clinical laboratories also are subject to state regulation. CLIA provides that a state may adopt different or more stringent regulations than Federal law, and permits states to apply for exemption from CLIA if HHS determines that the state's laboratory laws are equivalent to, or more stringent than, CLIA. The State of New York's clinical laboratory regulations contain provisions that are more stringent than Federal law, and New York has received exemption from CLIA.

Therefore, as long as New York maintains its CLIA-exempt status, laboratories in New York, including our laboratory, are regulated under New York law rather than CLIA. Our laboratory is licensed in New York and has continuing programs to ensure that its operations are in compliance with all applicable regulatory requirements.

Sanctions for non-compliance with applicable regulations may include, but are not limited to, suspension, revocation, or limitation of a laboratory's CLIA certificate, as well as fines and criminal penalties. The loss of, or adverse action against, a certificate or license, the imposition of fines, penalties or other sanctions, or future changes in Federal, state or local laboratory laws and regulations (or in the interpretation of current laws and regulations) could have a material adverse effect on our business.

Billing and reimbursement for clinical laboratory testing is subject to complex federal and state laws, rules and regulations, the violation of which may include, but is not necessarily limited to: (1) exclusion from participation in federal health care programs (including Medicare and Medicaid); (2) asset forfeitures; (3) civil monetary penalties; (4) criminal fines and penalties; and (5) the loss of licenses, certificates and/or authorizations necessary to operate some or all of a clinical laboratory's business.

The health care industry has been undergoing significant change because third-party payers, such as Medicare, Medicaid, health maintenance organizations and commercial insurers, have increased their efforts to control the cost, utilization and delivery of health care services. To address the problem of increasing health care costs, legislation has been proposed or enacted at both the Federal and state levels to regulate health care delivery in general, and clinical laboratories in particular.

Additional health care reform efforts are likely to be proposed in the future. In particular, we believe that reductions in reimbursement for Medicare services will continue to be implemented from time to time. Reductions in the reimbursement rates of other third-party payers, commercial insurer and health maintenance organizations are likely to occur as well. We cannot predict the effect that current and future health care reform measures, if enacted, would have on our business, and there can be no assurance that such reforms, if enacted, would not have a material adverse effect on our business and operations.

Containment of health care costs, including reimbursement for clinical laboratory services, has been a focus of ongoing governmental activity. Clinical laboratories must bill Medicare directly for the services provided to Medicare beneficiaries and may only collect the amounts permitted under the Medicare Fee Schedule. Reimbursement to clinical laboratories under the Medicare Fee Schedule has been steadily declining since its inception. Under federal health care reform legislation enacted in March 2010, the annual updates for clinical laboratory services through 2015, which are based on the Consumer Price Index for All Urban Consumers (CPI-U), are reduced by a multi-factor productivity adjustment and then by 1.75 percentage points. Based on these calculations, the Medicare Fee Schedule was reduced in calendar year 2011 by 1.75%, increased in calendar year 2012 by 0.65%, and decreased in calendar year 2013 by 2.95%. Future reductions/increases may occur depending on percentage changes in the CPI-U. (See Item 1A Risk Factors).

Future changes in federal, state and local regulations (or in the interpretation of current regulations) affecting governmental reimbursement for clinical laboratory testing could have a material adverse effect on our business. We cannot predict, however, whether and what type of legislation will be enacted into law. In addition, reimbursement disapprovals by the third party payers, commercial insurers and health maintenance organizations, reductions or delays in the establishment of reimbursement rates, carrier limitations on the insurance coverage of the Company's services or the use of the Company as a service provider could have a negative effect on the Company's future revenues. During calendar year 2013 the Medicare reimbursement rates were reduced by an additional 2% in connection with the government's sequestration cuts.

**Anti Fraud and Abuse Laws**

Existing Federal and state laws also regulate certain aspects of the relationship among healthcare providers, including clinical laboratories, and their referral sources (i.e., physicians, hospitals, other laboratories, etc.). One of these laws, known as the "Anti-Kickback Statute," contains extremely broad prohibitions against giving, accepting, soliciting (i.e., asking for) or arranging for remuneration in any form (i.e., cash, gifts, certain discounts, cross-referrals between parties, etc.), either directly or indirectly, for the purpose of inducing or rewarding another party for referrals of items or services paid for by a federal government health care program. The Anti-Kickback statute is very broad and includes the purchasing, ordering, leasing or arranging for, or recommending the purchase, leasing or ordering of, services paid for by a federal health care program in exchange for remuneration (i.e., anything of value).

Violation of the Anti-Kickback Statute may result in, among other things, a criminal conviction, significant monetary penalties and exclusion from federal health care programs (including Medicare and Medicaid). Any person or entity involved in a prohibited transaction is potentially subject to criminal and civil penalties. Compliance with the Anti-Kickback statute is also a condition of participation under Medicare, and therefore a laboratory that claims payment for a transaction prohibited by the Anti-Kickback Statute may also be subject to prosecution for violating a separate civil statute, the federal False Claims Act.

The False Claims Act is also a broad statute that the government often utilizes to combat fraud and abuse in the health care environment. Among other things, the statute is violated by any person who knowingly presents, or causes to be presented, a false or fraudulent claim for payment or approval; knowingly makes, uses, or causes to be made or used, a false record or statement material to a false or fraudulent claim; conspires to commit the above (or other specified) violations; or knowingly makes, uses, or causes to be made or used, a false record or statement material to an obligation to pay or transmit money or property to the government, or knowingly conceals or knowingly and improperly avoids or decreases an obligation to pay or transmit money or property to the government. The False Claims Act also provides that private parties may bring an action on behalf of (and in the name of) the United States to prosecute a False Claims Act violation. These private parties (known as "qui tam relators") may share in a percentage of the proceeds that result from a False Claims Act action or settlement. A person or entity found to have violated the False Claims Act may be held liable for a per claim civil penalty of not less than $5,500 and not more than $11,000, plus three times the amount of damages sustained by the government. A person violating the False Claims Act is also liable to the government for the costs of the civil action brought to recover any such penalty or damages. Other consequences may also result from a violation of the False Claims Act. New York has also adopted its own False Claims Act statute, which closely mirrors its federal counterpart.

Another Federal law, commonly known as the "Stark" law, prohibits physicians who have a financial relationship with an entity that furnishes "designated health services," which includes clinical laboratory services (including anatomic pathology and clinical chemistry services), from referring federal health care program beneficiaries to that entity for laboratory tests

unless a specific exception applies. In addition, laboratories may not bill federal health care programs, or any other payor, for services furnished pursuant to a prohibited referral. Violation of the Stark law may result not only in denial of payment for the underlying testing services, but also the imposition of civil monetary penalties and, potentially, False Claims Act liability. New York State has adopted laws that are similar to the Federal Stark law and Anti-Kickback Statute, which contain similar prohibitions and penalties.

The Stark law, and New York State regulations have also placed restrictions on the supplies and other items that laboratories may provide to their clients. These laws specify that laboratories may only provide clients with items or devices that are used solely to collect, transport or store specimens for the laboratory or to communicate results or tests. Items such as biopsy needles, snares and reusable needles are specifically prohibited from being supplied by laboratories to their clients. The Company has implemented procedures to ensure compliance with these laws and restrictions.

In February 1997, the OIG released model voluntary compliance program guidance for laboratories. One key aspect of the model compliance guidance was an emphasis on the responsibility of laboratories to notify physicians that Medicare covers only medically necessary services. This requirement, and the likely effect on physician test ordering habits, focuses on chemistry tests, especially routine tests, rather than on anatomic pathology services or the non-automated tests, which make up the majority of the Company's business measured in terms of net revenues. Nevertheless, it could potentially affect physicians' test ordering habits more broadly. The Company is unable to predict whether, or to what extent, these developments have impacted, or may impact, utilization of the Company's services.

The federal health care reform legislation adopted in March, 2010, known as the Patient Protection and Affordable Care Act, contains provisions requiring providers to establish compliance programs as a condition of enrollment in Medicare, Medicaid and the State Children's Health Insurance Program. Implementing regulations and guidance for clinical laboratories has not yet been issued yet by the Centers for Medicare and Medicaid Services. In addition, New York State has adopted mandatory compliance program requirements for certain specified providers, including those who directly or indirectly bill or collect more than $500,000 annually in Medicaid payments, and entities licensed under certain articles of the Public Health Law and Mental Hygiene Law, respectively. Although at this time the Company is not subject to the New York State requirement to implement a mandatory compliance program, the Company has nevertheless adopted its own Corporate Compliance Program based upon the OIG model program guidance. The Company's compliance program focuses on, among other things, establishing clear compliance standards; auditing and monitoring of the Company's billing and coding practices; training personnel on compliance standards, policies and procedures; preventing and detecting fraud, waste and abuse, enforcing a policy of non-retaliation and non-intimidation for good faith participation in the compliance program; and establishing good faith reporting of actual or suspected compliance violations.

The Company seeks to structure its arrangements with physicians and other customers in compliance with federal and state Anti-Kickback laws, Stark laws, False Claims Acts, and other applicable laws, rules and regulations, and to keep current on developments concerning their application to the Company, including consultation with legal counsel. However, the Company is unable to predict how such laws and regulations will be interpreted and applied in the future, and thus no assurances can be given that its arrangements or processes will not become subject to scrutiny by a governmental agency.

**Confidentiality of Health Information**

The Health Insurance Portability and Accountability Act of 1996 ("HIPAA") was signed into law on August 21, 1996, and it included "administrative simplification" provisions designed to standardize common electronic transactions in health care and to protect the security and privacy of health information. Congress' purpose in promulgating HIPAA was to increase the efficiency of health care transactions while, at the same time, protecting the confidentiality of patient information. Regulations have been adopted for electronic transaction, privacy and security standards and include the requirement to use a National Provider Identifier in electronic health care transactions. These provisions have very broad applicability and they specifically apply to health care providers, which include physicians and clinical laboratories. The National Provider Identifier is an identifier that replaced all other identifiers that are currently used for healthcare transactions (e.g., UPIN, Medicaid provider numbers; identifiers assigned by commercial insurers).

The electronic transaction standards regulations created guidelines for certain common health care transactions. With certain exceptions, these standards require that, when we conduct certain transactions electronically with another provider, clearinghouse or health plan, we must comply with the standards set forth in the regulations. The regulations established standard data content and format for submitting electronic claims and other administrative health transactions. Health care providers and health plans are required to use standard formats when transmitting claims, referrals, authorizations, and certain other transactions electronically. The Company believes it is in compliance with these standards.

**Privacy regulations and specific requirements for the use and disclosure of protected health information ("PHI").**

We are required to maintain numerous policies and procedures in order to comply with the HIPAA privacy and security requirements. Furthermore, we need to continuously ensure that there are mechanisms to safeguard the PHI, which is used or maintained in any format (e.g. oral, written, or electronic). Failure to comply with these requirements can result in criminal and civil penalties.

The security regulations also require us to ensure the confidentiality, integrity and availability of all electronic protected health information ("EPHI") that we create, receive, maintain, or transmit. We have some flexibility to fashion our own security measures to accomplish these goals. The security regulations strongly emphasize that we must conduct an accurate and thorough assessment of the potential risks and vulnerabilities of the confidentiality, integrity and availability of our EPHI and then document our response to the various security regulations on the basis of that assessment.

The privacy and security regulations were modified in 2013 as a result of regulations published pursuant to the Health Information Technology Act ("HITECH"). HITECH requires, among other things, that providers, such as laboratories, notify patients of breaches of unsecured protected health information, enter new business associate agreements with existing business associates and revise many of their existing privacy policies. In addition, HITECH makes business associates directly liable to the Federal government for compliance with certain aspects of the privacy and security regulations.

Complying with the electronic transaction, privacy and security rules requires significant effort and expense for virtually all entities that conduct health care transactions electronically and handle patient health information.

**Medical Regulated Waste**

We are subject to licensing and regulation under federal, state and local laws relating to the handling and disposal of medical specimens, infectious and hazardous waste, as well as to the safety and health of laboratory employees. All our laboratories are required to operate in accordance with applicable federal and state laws and regulations relating to biohazard disposal of all facilities specimens. We use outside vendors to dispose of such specimens. Although we believe that we comply in all respects with such federal, state and local laws, our failure to comply with those laws could subject us to denial of the right to conduct business, fines, criminal penalties and/or other enforcement actions.

**Occupational Safety**

In addition to its comprehensive regulation of safety in the workplace, the U.S. Federal Occupational Safety and Health Administration ("OSHA") has established extensive requirements relating to workplace safety for health care employers, including clinical laboratories, whose workers may be exposed to blood-borne pathogens such as HIV and the hepatitis B virus. These regulations, among other things, require work practice controls, protective clothing and equipment, training, medical follow-up, vaccinations and other measures designed to minimize exposure to, and transmission of, blood-borne pathogens. The Federal Drug Enforcement Administration regulates the use of controlled substances in testing for drugs of abuse. We are also subject to OSHA's requirement that employers using hazardous chemicals communicate the properties and hazards presented by those chemicals to their employees.

We believe that we are in compliance with these OSHA requirements. Our failure to comply with those regulations and requirements could subject us to tort liability, civil fines, criminal penalties and/or other enforcement actions.

**Other Regulation**

Our business is and will continue to be subject to regulation under various state and federal environmental, safety and health laws, including the Occupational Safety and Health Act, the Resource Conservation and Recovery Act, and the Atomic Energy Act or their state law analogs. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in our operations and wastes generated by our operations. We are required to possess licenses under, or are otherwise subject to federal and state regulations pertaining to, the handling and disposal of medical specimens, infectious and hazardous waste and radioactive materials.

We believe that we are in compliance with applicable environmental, safety and health laws in the United States and internationally and that our continual compliance with these laws will not have a material adverse effect on our business. All of our laboratories are operated in accordance with applicable federal and state laws and regulations relating to hazardous substances and wastes, and we use qualified third-party vendors to dispose of biological specimens and other hazardous wastes. Although we believe that we comply in all respects with such federal, state and local laws, our failure to comply with those laws could subject us to denial of the right to conduct business, civil fines, criminal penalties and/or other enforcement actions. Environmental contamination resulting from spills or disposal of hazardous substances generated by our operations, even if caused by a third-party contractor or occurring at a remote location could result in material liability.

**Regulation of Diagnostics**

The diagnostic products that are developed by our collaborators, or by us, are likely to be regulated by the FDA as medical devices. Unless an exemption applies, medical devices must receive either "510(k) clearance" or pre-market approval ("PMA") from the FDA before marketing them in the United States. The FDA's 510(k) clearance process usually takes from four to twelve months, but it can last longer. The process of obtaining PMA approval is much more costly, lengthy and uncertain. It generally takes from one to three years or even longer. We cannot be sure that 510(k) clearance or PMA approval will ever be obtained for any product we propose to market.

The FDA decides whether a device must undergo either the 510(k) clearance or PMA approval process based upon statutory criteria. These criteria include the level of risk that the agency perceives is associated with the device and a determination whether the product is a type of device that is similar to devices that are already legally marketed. Devices deemed to pose relatively less risk are placed in either class I or II, which requires the manufacturer to submit a premarket notification requesting 510(k) clearance, unless an exemption applies. The pre-market notification must demonstrate that the proposed device is "substantially equivalent" in intended use and in safety and effectiveness to a legally marketed "predicate device" that is either in class I, class II, or is a "pre-amendment" class III device (i.e., one that was in commercial distribution before May 28, 1976) for which the FDA has not yet called for submission of a PMA application.

After a device receives 510(k) clearance, any modification that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, requires a new 510(k) clearance or could require a PMA approval. The FDA requires each manufacturer to make this determination in the first instance, but the FDA can review any such decision. If the FDA disagrees with a manufacturer's decision not to seek a new 510(k) clearance, the agency may retroactively require the manufacturer to seek 510(k) clearance or PMA approval. The FDA also can require the manufacturer to cease marketing and/or recall the modified device until 510(k) clearance or PMA approval is obtained.

Devices deemed by the FDA to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices, or deemed not substantially equivalent to a legally marketed class I or class II predicate device, or to a preamendment class III device, for which PMAs have not been called, are placed in class III. Such devices are required to undergo the PMA approval process in which the manufacturer must prove the safety and effectiveness of the device to the FDA's satisfaction. A PMA application must provide extensive preclinical and clinical trial data and also information about the device and its components regarding, among other things, device design, manufacturing and labeling. After approval of a PMA, a new PMA or PMA supplement is required in the event of a modification to the device, it's labeling or its manufacturing process.

Although clinical investigations of most devices are subject to the investigational device exemption ("IDE") requirements, clinical investigations of in vitro diagnostic ("IVDs") tests are exempt from the IDE requirements, including the need to obtain the FDA's prior approval, provided the testing is noninvasive, does not require an invasive sampling procedure that presents a significant risk, does not introduce energy into the subject, and is not used as a diagnostic procedure without confirmation by another medically established test or procedure.

In addition, the IVD must be labeled for Research Use Only (RUO) or Investigational Use Only (IUO), and distribution controls must be established to assure that IVDs distributed for research or investigation are used only for those purposes. The FDA expressed its intent to exercise heightened enforcement with respect to IUO and RUO devices improperly commercialized prior to receipt of FDA clearance or approval.

We have developed products that we currently distribute in the United States on a RUO basis. There can be no assurance that the FDA would agree that our distribution of these products meets the requirements for RUO distribution. Furthermore, failure by us or recipients of our RUO products to comply with the regulatory limitations on the distribution and use of such devices could result in enforcement action by the FDA, including the imposition of restrictions on our distribution of these products.

Any devices that we manufacture or distribute will be subject to a host of regulatory requirements, including the Quality System Regulation (which requires manufacturers to follow elaborate design, testing, control, documentation and other quality assurance procedures), the Medical Device Reporting regulation (which requires that manufacturers report to the FDA certain types of adverse events involving their products), labeling regulations, and the FDA's general prohibition against promoting products for unapproved or "off label" uses. Class II devices also can have special controls such as performance standards, post market surveillance, patient registries, and FDA guidelines that do not apply to class I devices. Unanticipated changes in existing regulatory requirements or adoption of new requirements could hurt our business, financial condition and results of operations.

We are subject to inspection and market surveillance by the FDA to determine compliance with regulatory requirements. If the FDA finds that we have failed to comply, the agency can institute a wide variety of enforcement actions, ranging from a public warning letter to more severe sanctions such as fines, injunction, civil penalties, recall or seizure of our products, the issuance of public notices or warnings, operating restrictions, partial suspension or total shutdown of production, refusal of our requests for 510(k) clearance or PMA approval of new products, withdrawal of 510(k) clearance or PMA approvals already granted, and criminal prosecution.

The FDA also has the authority to request repair, replacement or refund of the cost of any medical device manufactured or distributed by us. Our failure to comply with applicable requirements could lead to an enforcement action that may have an adverse effect on our financial condition and results of operations.

Unanticipated changes in existing regulatory requirements, our failure to comply with such requirements or adoption of new requirements could have a material adverse effect on us.

We have employees to expedite the preparation and filing of documentation necessary for FDA clearances and approvals, patent issuances and licensing agreements.

We cannot assure you that future clinical diagnostic products developed by us or our collaborators will not be required to be reviewed by FDA under the more expensive and time consuming pre-market approval process.

**Regulation of Pharmaceutical Products**

New drugs and biological drug products are subject to regulation under the Federal Food, Drug and Cosmetic Act, and biological products are also regulated under the Public Health Service Act. We believe that products developed by us or our collaborators will be regulated either as biological products or as new drugs. Both statutes and regulations promulgated thereunder govern, among other things, the testing, licensing, manufacturing, marketing, distributing, safety, and efficacy requirements, labeling, storage, exporting, record keeping, advertising and other promotional practices involving biologics or new drugs, as the case may be. FDA review or approval or other clearances must be obtained before clinical testing, and before manufacturing and marketing, of biologics and drugs. At the FDA, the Center for Biological Evaluation and Research ("CBER") is responsible for the regulation of biological drugs and the Center for Drug Evaluation and Research ("CDER") is responsible for the regulation of non-biological drugs. Biological drugs are licensed and other drugs are approved before commercialization.

Any therapeutics products that we develop will require regulatory review before clinical trials, and additional regulatory clearances before commercialization. New human gene medicine products as well as immune regulation products, as therapeutics, are subject to regulation by the FDA and comparable agencies in other countries. The FDA on a case-by-case basis currently reviews each protocol. In addition, the National Institutes of Health ("NIH") is also involved in the oversight of gene therapies and the FDA has required compliance with certain NIH requirements.

Federal requirements are detailed in Title 21 of the Code of Federal Regulations (21 CFR). In addition, the FDA publishes guidance documents with respect to the development of therapeutics protocols.

Obtaining FDA approval has historically been a costly and time-consuming process. Generally, to gain FDA approval, a developer first must conduct pre-clinical studies in the laboratory evaluating product chemistry, formulation and stability and, if appropriate, in animal model systems, to gain preliminary information on safety and efficacy.

Pre-clinical safety tests must be conducted by laboratories that comply with FDA regulations governing Good Laboratory Practices (GLP). The results of those studies are submitted with information characterizing the product and its manufacturing process and controls as a part of an investigational new drug ("IND") application, which the FDA must satisfactorily review before human clinical trials of an investigational drug can start. The IND application includes a detailed description of the clinical investigations to be undertaken in addition to other pertinent information about the product, including descriptions of any previous human experience and the company's future plans for studying the drug.

In order to commercialize any products, we (as the sponsor) file an IND and will be responsible for initiating and overseeing the clinical studies to demonstrate the safety and efficacy necessary to obtain FDA marketing approval of any such products. For INDs that we sponsor, we will be required to select qualified clinical sites (usually physicians affiliated with medical institutions) to supervise the administration of the investigational product. It is the sponsor's responsibility to ensure that the investigations are conducted and monitored in accordance with FDA regulations, Good Clinical Practices (GCP) and the general investigational plan and protocols contained in the IND. This may be done using in-house trained personnel or an outside contract research organization (CRO).

Each clinical study is reviewed and approved by an Institutional Review Board (IRB). The IRB will consider, among other things, ethical factors and the safety of human subjects. Clinical trials are normally conducted in three phases, although the phases might overlap. Phase I trials, concerned primarily with the safety and tolerance of the drug, and its pharmacokinetics (or how it behaves in the body including its absorption and distribution) involve fewer than 100 subjects. Phase II trials normally involve a few hundred patients and are designed primarily to demonstrate preliminary effectiveness and the most suitable dose or exposure level for treating or diagnosing the disease or condition for which the drug is intended, although short-term side effects and risks in people whose health is impaired may also be examined. Phase III trials are expanded, adequate and well-controlled clinical trials with larger numbers of patients and are intended to gather the additional information for proper dosage and labeling of the drug. Clinical trials generally take two to five years, but the period may vary. Certain regulations promulgated by the FDA may shorten the time periods and reduce the number of patients required to be tested in the case of certain life-threatening diseases, which lack available alternative treatments.

The FDA receives reports on the progress of each phase of clinical testing, and it may require the modification, suspension or termination of clinical trials if an unwarranted risk is presented to patients. Human gene medicine products are a new category of therapeutics.

There can be no assurance regarding the length of the clinical trial period, the number of patients that the FDA will require to be enrolled in the clinical trials in order to establish the safety, purity and potency of human gene medicine products, or that the clinical and other data generated will be acceptable to the FDA to support marketing approval.

After completion of clinical trials of a new product, FDA marketing approval must be obtained before the product can be sold in the United States. If the product is regulated as a new biologic, CBER requires the submission and approval of a Biologics License Application (BLA) before commercial marketing of the biologic product. If the product is classified as a new drug, we must file a New Drug Application ("NDA") with CDER and receive approval before commercial marketing of the drug. The NDA or BLA must include results of product development, pre-clinical studies and clinical trials. The testing and approval processes require substantial time and effort and there can be no assurance that any approval will be granted on a timely basis, if at all. The median time to obtain new product approvals after submission to the FDA is approximately 12 months. If questions arise during the FDA review process, approval can take longer. Before completing its review, the FDA may seek guidance from an Advisory Panel of outside experts at a public or closed meeting. While the advice of these committees is not binding on the FDA, it is often followed. Notwithstanding the submission of relevant data, the FDA might ultimately decide that the NDA or BLA does not satisfy its regulatory criteria for approval and, thus, reject the application, refuse to approve it, or require additional clinical, preclinical or chemistry studies. Even after FDA regulatory approval or licensure, a marketed drug product is subject to continual review by the FDA.

In addition, if previously unknown problems are discovered or we fail to comply with the applicable regulatory requirements, we might be restricted from marketing a product, we might be required to withdraw the product from the market, and we might possibly become subject to seizures, injunctions, voluntary recalls, or civil, monetary or criminal sanctions. In addition, the FDA may condition marketing approval on the conduct of specific post-marketing studies to further evaluate safety and effectiveness.

For commercialization of our biological or other drug products, the manufacturing processes described in our NDA or BLA must receive FDA approval and the manufacturing facility must successfully pass an inspection prior to approval or licensure of the product for sale within the United States. The pre-approval inspection assesses whether, for example, the facility complies with the FDA's current good manufacturing practices (cGMP) regulations. These regulations elaborate testing, control, documentation, personnel, record keeping and other quality assurance procedure requirements that must be met.

Once the FDA approves our biological or other drug products for marketing, we must continue to comply with the cGMP regulations. The FDA periodically inspects biological and other drug manufacturing facilities to ensure compliance with applicable cGMP requirements. Failure to comply with the statutory and regulatory requirements subjects the manufacturer to possible legal or regulatory action, such as suspension of manufacturing, seizure of product or voluntary recall of a product.

If a developer obtains designation by the FDA of a biologic or other drug as an "orphan" for a particular use, the developer may request grants from the federal government to defray the costs of qualified testing expenses in connection with the development of such drug. Orphan drug designation is possible for drugs for rare diseases, including many genetic diseases, which means the drug is for a disease that has a prevalence of less than 200,000 patients in the United States. The first applicant who receives an orphan drug designation and who obtains approval of a marketing application for such drug acquires the exclusive marketing rights to that drug for that use for a period of seven years unless the subsequent drug can be shown to be clinically superior. Accordingly, no other company would be allowed to market an identical orphan drug with the same active ingredient for the use approved by the FDA for seven years after the approval.

**Manufacturing and Research Facilities**

Our internal integrated laboratory and scientific efforts for our three segments take place primarily at our two adjacent facilities in Farmingdale, New York. A major part of one facility is utilized by Life Science as its global headquarters, and also for research and manufacturing with special handling capabilities and clean rooms suitable for our operations The Life Sciences segment has centered its US logistics, reagent and kit manufacturing at its facility in Ann Arbor, Michigan, and has European logistics operations in Lausen, Switzerland. We also contract with qualified third-party contractors to manufacture our products in cases where we deem it appropriate, for example, when it is not cost-effective to produce a product ourselves or where we seek to leverage the expertise of another manufacturer in a certain area.

**Employees**

As of July 31, 2013, we employed 423 full-time and 61 part-time employees. Of the full-time employees, 100 were engaged in research, development, manufacturing, and marketing of research products, 3 in therapeutics research, 267 in performing testing, marketing and billing our clinical laboratories services and 53 in finance, legal, administrative and executive functions. Our scientific staff, including 57 individuals with post graduate degrees, possesses a wide range of experience and expertise in the areas of recombinant DNA, nucleic acid chemistry, molecular biology and immunology. We believe that we have established good relationships with our employees.

**Information Systems**

Information systems are used extensively in virtually all aspects of our businesses. In our clinical laboratory business, our information systems are critical with respect to laboratory testing, billing, accounts receivable, customer service, logistics, and management of medical data. Our success depends, in part, on the continued and uninterrupted performance of our information technology systems. Computer systems are vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious human acts and natural disasters.

Moreover, despite network security measures, some of our servers are potentially vulnerable to physical or electronic break-ins, computer viruses and similar disruptive problems. We have invested heavily in the upgrade of our information and telecommunications systems to improve the quality, efficiency and security of our businesses. In addition, to complement our proprietary physician connectivity solution, EnzoDirect™ we have a web portal version which allows physicians to receive laboratory results from any personal computer with a browser and an Internet connection.

Despite the precautionary measures that we have taken to prevent unanticipated problems that could affect our information technology systems, sustained or repeated system failures that interrupt our ability to process test orders, deliver test results or perform tests in a timely manner could adversely affect our reputation and result in a loss of customers and net revenues.

**Quality Assurance**

We consider the quality of our clinical laboratory tests to be of critical importance, and, therefore, we maintain a comprehensive quality assurance program designed to help assure accurate and timely test results. In addition to the compulsory external inspections and proficiency programs demanded by the Medicare program and other regulatory agencies, our clinical laboratory has in place systems to emphasize and monitor quality assurance.

In addition to our own internal quality control programs, our laboratory participates in numerous externally administered, blind quality surveillance programs, including on-site evaluation by the College of American Pathologies (“CAP”) proficiency testing program and the New York State survey program. The blind programs supplement all other quality assurance procedures and give our management the opportunity to review our technical and service performance from the client’s perspective.

The CAP accreditation program involves both on-site inspections of our laboratory and participation in the CAP's proficiency testing program for all categories in which our laboratory is accredited by the CAP. The CAP is an independent nongovernmental organization of board certified pathologists, which offers an accreditation program to which laboratories can voluntarily subscribe. A laboratory's receipt of accreditation by the CAP satisfies the Medicare requirement for participation in proficiency testing programs administered by an external source. Our clinical laboratory facilities are accredited by the CAP.

**FORWARD - LOOKING AND CAUTIONARY STATEMENTS**

This Annual Report contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact, including, without limitation, the statements under "Management's Discussion and Analysis of Financial Condition and Results of Operations" are "forward-looking statements." Forward-looking statements may include the words "believes," "expects," "plans," "intends," "anticipates," "continues" or other similar expressions. These statements are based on the Company's current expectations of future events and are subject to a number of risks and uncertainties that may cause the Company's actual results to differ materially from those described in the forward-looking statements. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, estimated or projected. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

The Company files annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission (the "SEC"). These filings are available to the public via the Internet at the SEC's website located at http://www.sec.gov. You may also read and copy any document the Company files with the SEC at the SEC's public reference room located at 100 F Street, N.E., Washington, D.C. 20549. For more information, please call the SEC at 1-800-SEC-0330.

The Company's website is located at www.enzo.com. The Company makes available on its website a link to all filings that it makes with the SEC. You may request a copy of the Company's filings with the SEC (excluding exhibits) at no cost by writing or telephoning us at the following address or telephone number:

Enzo Biochem, Inc.
527 Madison Ave.
New York, New York 10022
Tel: (212) 583-0100
Attn: Investor Relations

**Item 1A. Risk Factors**

***Risks relating to our Company and our industries***

**We have experienced significant losses in our last five fiscal years and quarter to quarter over such periods and our losses have resulted in the use of cash in operations. If such losses and cash uses continue, the value of your investment could decline significantly.**

We incurred net losses of $18.2 million, $39.3 million, inclusive of a non-cash impairment charge of $22.4 million net of tax of $2.1 million (See Note 2) and $12.9 million for the fiscal years ended July 31, 2013, 2012 and 2011, respectively. If our revenues do not increase, or if our operating expenses exceed expectations or cannot be reduced, we will continue to suffer substantial losses and use cash in operations which could have an adverse effect on our business and adversely affect your investment in our Company.

**We may need additional capital to fund growth, which may not be available on acceptable terms or at all, and could result in our business plan being limited and our business being harmed.**

Our ability to increase revenue and improve profitability and liquidity will depend in part on our ability to grow the Enzo Life Science business with higher margin products and increase our market share and continue to grow the Enzo Clinical Lab business with new tests with higher reimbursements and increase our service volume which may require significant additional capital that may not be available to us. We may need additional financing due to future developments, changes in our business plan or failure of our current business plan to succeed, which could result from increased marketing, distribution or research and development costs. Our actual funding requirements could vary materially from our current estimates. If additional financing is needed, we may not be able to raise sufficient funds on favorable terms or at all. If we issue common stock or securities convertible into common stock in the future, such issuance will result in the then-existing stockholders sustaining dilution to their relative proportion of our outstanding equity. If we fail to obtain any necessary financing on a timely basis, then our ability to execute our current business plan may be limited, and our business, liquidity and financial condition could be harmed.

**Our operating results may vary from period to period.**

Our operating results may vary significantly from quarter to quarter and from year to year, depending on a variety of factors including:

- competitive conditions, including changes in third-party reimbursements;
- health care reform regulations affecting providers and plan sponsors;
- changes in reimbursement policies from third party payers;
- exchange rate fluctuations;
- changes in tax laws, the results of tax audits or the measurement of tax uncertainties;
- the timing of our research and development, sales and marketing expenses;
- the introduction of new products by us or our competitors;
- the success of identifying, acquiring and integrating businesses that complement our product offerings, add new technology or add presence in a market;
- expenses associated with defending our intellectual property portfolio;
- customer demand for our products due to changes in purchasing requirements and research needs;
- general worldwide economic conditions affecting funding of research and
- seasonal fluctuations affected by weather and holiday periods.

Consequently, results for any interim period may not necessarily be indicative of results in subsequent periods.

**A significant proportion of our sales are to academic centers, funded by government grants in our major markets globally.**

Governments around the world have been reviewing long term public funding of life science research in response to the problems arising from global financial pressures. As a result, the available funds for discretionary purchases from market to market have been capped or reduced based on available National budgets. Reduced grants for researchers could impact our business, in the amount, price and type of products bought and used by customers.

**A significant proportion of our sales are to customers in Pharmaceutical and Biotech companies.**

Globally, pharmaceutical companies are challenging internal budgets, and the return of investment from their R&D spend. This could impact our business, in the amount, price and type of products bought and used by customers.

**Our future success will depend in part upon our ability to enhance existing products and to develop and introduce new products.**

The market for our products is characterized by rapidly changing technology, evolving industry standards and new product introductions, which may make our existing products obsolete.

Our future success will depend in part upon our ability to enhance existing products and to develop and introduce new products.

The development of new or enhanced products is a complex and uncertain process requiring the accurate anticipation of technological and market trends as well as precise technological execution. In addition, the successful development of new products will depend on the development of new technologies. We will be required to undertake time-consuming and costly development activities and to seek regulatory approval for these new products. We may experience difficulties that could delay or prevent the successful development, introduction and marketing of these new products. Regulatory clearance or approval of any new products may not be granted by the FDA, state-wide agency or foreign regulatory authorities on a timely basis, or at all, and the new products may not be successfully commercialized.

**We may be unable to identify, acquire and integrate acquisition targets.**

In the past six fiscal years we have made significant acquisitions in our Life Sciences segment. Our strategy envisions, if an opportunistic target is identified, future growth from acquiring and integrating similar operations and/or product lines. There can be no assurance that we will be able to identify suitable acquisition candidates and, once identified, to negotiate successfully their acquisition at a price or on terms and conditions favorable to us, or to integrate the operations of such acquired businesses with the existing operations. In addition, we compete for acquisition candidates with other entities, some of which have greater financial resources than ours. Our failure to implement successfully its acquisition strategy would limit our potential growth.

**Our inability to carry out certain of our marketing and sales plans may make it difficult for us to grow or maintain our business.**

The Life Sciences segment continues a marketing program designed to more directly service its end users, while simultaneously promoting the Enzo Life Science brand, with reference to our acquired brands. We will continue to reach out to our customers using our direct field sales force, in house business team, the on-going enhancement of our interactive websites, continued attendance at top industry trade meetings, and publications to customers and in leading scientific journals. In addition to our direct sales, we operate worldwide through wholly-owned subsidiaries (in USA, Switzerland, Belgium, Germany, and the UK), a branch office in France and a network of third-party distributors in most other significant markets. If we are unable to successfully continue these programs, we may be unable to grow and our business could suffer.

**We face intense competition, which could cause us to decrease the prices for our products or services or render our products uneconomical or obsolete, any of which could reduce our revenues and limit our growth.**

Our competitors in the biotechnology industry in the United States and abroad are numerous and include major pharmaceutical, energy, food and chemical companies, as well as specialized genetic engineering firms. Many of our large competitors have substantially greater resources than us and have the capability of developing products which compete directly with our products. Many of these companies are performing research in the same areas as we are. The markets for our products are also subject to competitive risks because markets are highly price competitive. Our competitors have competed in the past by lowering prices on certain products.

The clinical laboratory business is highly fragmented and intensely competitive, and we compete with numerous national and local companies. Some of these entities are larger than we are and have greater resources than we do. We compete primarily on the basis of the quality of our testing, reporting and information services, our reputation in the medical community, the pricing of our services and our ability to employ qualified professionals.

These competitive conditions could, among other things:

- Require us to reduce our prices to retain market share;
- Require us to increase our marketing efforts which could reduce our profit margins;
- Increase our cost of labor to attract qualified personnel;
- Render our biotechnology products uneconomical or obsolete or;
- Reduce our revenue.

**We depend on distributors and contract manufacturers and suppliers for materials that could impair our ability to manufacture or distribute our products.**

Outside distributors, suppliers and contract manufacturers provide key finished goods, components and raw materials used in the sale and manufacture of our products. Our Life Sciences segment distributes product for over 40 unrelated third party manufacturers, and own brand products from large numbers of suppliers. To the extent we are unable to maintain or replace a distributor in a reasonable time period, or on commercially reasonable terms, if at all, our operations could be disrupted. Although we believe that alternative sources for components and raw materials are available, any supply interruption in a limited or sole source component or raw material would harm our ability to manufacture our products until a new source of supply is identified and qualified. In addition, an uncorrected defect or supplier's variation in a component or raw material, either unknown to us or incompatible with our manufacturing process, could harm our ability to manufacture products. We might not be able to find a sufficient alternative supplier in a reasonable time period, or on commercially reasonable terms, if at all. If we fail to obtain a supplier for the components of our products, our operations could be disrupted.

**We use hazardous materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be costly and time-consuming.**

Our manufacturing, clinical laboratory and research and development processes involve the storage, use and disposal of hazardous substances, including hazardous chemicals, biological hazardous materials and radioactive compounds. We are subject to governmental regulations governing the use, manufacture, storage, handling and disposal of materials and waste products. Although we believe that our safety and environmental management practices and procedures for handling and disposing of these hazardous materials are in accordance with good industry practice and comply with applicable laws, permits, licenses and regulations, the risk of accidental environmental or human contamination or injury from the release or exposure of hazardous materials cannot be completely eliminated. In the event of an accident, we could be held liable for any damages that result, including environmental clean-up or decontamination costs, and any such liability could exceed the limits of, or fall outside the coverage of, our insurance.

We may not be able to maintain insurance on acceptable terms, or at all. We could be required to incur significant costs to comply with current or future environmental and public and workplace safety and health laws and regulations.

**We are required to expend significant resources for research and development for our products in development and these products may not be developed successfully. Failure to successfully develop these products may prevent us from earning a return on our research and development expenditures.**

The products we are developing are at various stages of development and clinical evaluations and may require further technical development and investment to determine whether commercial application is practicable. There can be no assurance that our efforts will result in products with valuable commercial applications. Our cash requirements may vary materially from current estimates because of results of our research and development programs, competitive and technological advances and other factors. In any event, we will require substantial funds to conduct development activities and pre-clinical and clinical trials, apply for regulatory approvals and commercialize products, if any, that are developed.

We do not have any commitments or arrangements to obtain any additional financing and there is no assurance that required financing will be available to us on acceptable terms, if at all. Even if we spend substantial amounts on research and development, our potential products may not be developed successfully.

If our product candidates on which we have expended significant amounts for research and development are not commercialized, we will not earn a return on our research and development expenditures, which may harm our business.

***Risks relating to our Intellectual Property and Regulatory Approval***

**Protecting our proprietary rights is difficult and costly. If we fail to adequately protect or enforce our proprietary rights, we could lose potential revenue from licensing and royalties.**

Our potential revenue and success depends in large part on our ability to obtain, maintain and enforce our patents. Our ability to commercialize any product successfully will largely depend on our ability to obtain and maintain patents of sufficient scope to prevent third parties from developing similar or competitive products.

In the absence of patent protection, competitors may impact our business by developing and marketing substantially equivalent products and technology.

Patent disputes are frequent and can preclude the commercialization of products. We have in the past been, are currently, and may in the future be, involved in material patent litigation, such as the matters discussed under “Part I - Item 3. Legal Proceedings” in this report. Patent protection litigation is time-consuming and we have incurred and anticipate continuing to incur significant legal costs. In addition, an adverse decision could force us to either obtain third-party licenses at a material cost or cease using the technology or product in dispute.

We have filed applications for United States and foreign patents covering certain aspects of our technology, but there is no assurance that pending patents will issue or as to the degree of protection which any issued patent might afford.

**Lawsuits, including patent infringements, in the biotechnology industry are not uncommon. If we become involved in any significant litigation, we would suffer as a result of the diversion of our management’s attention, the expense of litigation and any judgments against us.**

In addition to intellectual property litigation for infringement, other substantial, complex or extended litigation could result in large expenditures by us and distraction of our management. Patent litigation is time-consuming and costly in its own right and could subject us to significant liabilities to third parties. In addition, an adverse decision could force us to either obtain third-party licenses at a material cost or cease using the technology or product in dispute. In addition, lawsuits by employees, stockholders, collaborators or distributors could be very costly and substantially disrupt our business. Disputes from time to time with companies or individuals are not uncommon in the biotechnology industry, and we cannot assure you that we will always be able to resolve them out of court.

We also utilize certain unpatented proprietary technology and no assurance can be given that others will not independently develop substantially equivalent proprietary technology, that such proprietary technology will not be disclosed or that we can meaningfully protect our rights to such proprietary technology.

**We may incur impairment charges on our goodwill and intangibles which would reduce our earnings.**

We are subject to Statement of Financial Accounting Standards ASC 350, “Intangibles, Goodwill and Other (“ASC 350”) which requires that goodwill and other intangible assets that have an indefinite life be tested at least annually for impairment. Goodwill and other intangible assets with indefinite lives must also be tested for impairment between the annual tests if a triggering event occurs that would likely reduce the fair value of the asset below its carrying amount.

As of July 31, 2013 and 2012, goodwill represented approximately 13% and 11%, respectively, of our total assets. During the fiscal 2012 fourth quarter we recorded impairments on our indefinite-lived intangibles of $5.7 million and our goodwill of $18.8 million. The aggregate non-cash charge of $24.5 million did not impact the Company’s consolidated cash flows, liquidity and capital resources (See Note 2 to the Consolidated Financial Statements). If we determine that there has been impairment, our financial results for the relevant period would be reduced by the amount of the impairment, net of tax effects, if any. After May 1, 2012, the Company had no intangible assets with indefinite lives.

**We may be unable to obtain or maintain regulatory approvals for our products, which could reduce our revenue or prevent us from earning a return on our research and development expenditures.**

Our research, preclinical development, clinical trials, product manufacturing and marketing are subject to regulation by the FDA and similar health authorities in foreign countries. FDA approval is required for our products, as well as the manufacturing processes and facilities, if any, used to produce our products that may be sold in the United States. The process of obtaining approvals from the FDA is costly, time consuming and often subject to unanticipated delays. Even if regulatory approval is granted, such approval may include significant limitations on indicated uses for which any products could be marketed. Further, even if such regulatory approvals are obtained, a marketed product and its manufacturer are subject to continued review, and later discovery of previously unknown problems may result in restrictions on such product or manufacturer, including withdrawal of the product from the market.

New government regulations in the United States or foreign countries also may be established that could delay or prevent regulatory approval of our products under development. Further, because gene therapy is a relatively new technology and has not been extensively tested in humans, the regulatory requirements governing gene therapy products are uncertain and may be subject to substantial further review by various regulatory authorities in the United States and abroad. This uncertainty may result in extensive delays in initiating clinical trials and in the regulatory approval process. Our failure to obtain regulatory approval of their proposed products, processes or facilities could have a material adverse effect on our business, financial condition and results of operations. The proposed products under development may also be subject to certain other federal, state and local government regulations, including, but not limited to, the Federal Food, Drug and Cosmetic Act, the Environmental Protection Act, and Occupational Safety and Health Act, and state, local and foreign counterparts to certain of such acts.

We cannot be sure that we can obtain necessary regulatory approvals on a timely basis, if at all, for any of the products we are developing or manufacturing or that we can maintain necessary regulatory approvals for our existing products, and all of the following could have a material adverse effect on our business:

- significant delays in obtaining or failing to obtain required approvals;
- loss of, or changes to, previously obtained approvals;
- failure to comply with existing or future regulatory requirements and;
- changes to manufacturing processes, manufacturing process standards or Good Manufacturing Practices following approval or changing interpretations of these factors.

**Adverse perception and increased regulatory scrutiny of gene medicine and genetic research might limit our ability to conduct our business.**

Ethical, social and legal concerns about gene medicine, genetic testing and genetic research could result in additional regulations restricting or prohibiting the technologies we or our collaborators may use. Recently, gene medicine studies have come under increasing scrutiny, which has delayed ongoing and could delay future clinical trials and regulatory approvals. Federal and state agencies, congressional committees and foreign governments have expressed interest in further regulating biotechnology. More restrictive regulations or claims that our products are unsafe or pose a hazard could prevent us from commercializing any products.

***Risks relating to our Clinical Labs services segment***

**Our clinical laboratory business is subject to extensive government regulation and our loss of any required certifications or licenses could require us to cease operating this part of our business, which would reduce our revenue and injure our reputation.**

The clinical laboratory industry is subject to significant governmental regulation at the Federal, state and local levels. Under the Clinical Laboratory Improvement Act of 1967 and the Clinical Laboratory Improvement Amendments of 1988 (collectively, as amended, "CLIA") virtually all clinical laboratories, including ours, must be certified by the Federal government. Many clinical laboratories also must meet other governmental standards, undergo proficiency testing and are subject to inspection. Certifications or licenses are also required by various state and local laws. The failure of our clinical laboratory to obtain or maintain such certifications or licenses under these laws could interrupt our ability to operate our clinical laboratory business and injure our reputation.

**Reimbursements from third-party payers, upon which our clinical laboratory business is dependent, are subject to inconsistent rates and coverage and legislative reform that are beyond our control. This inconsistency and any reform that decreases coverage and rates could reduce our earnings and harm our business.**

Our clinical laboratory business is primarily dependent upon reimbursement from third-party payers, such as Medicare (which principally serves patients 65 and older) and commercial insurers. We are subject to variances in reimbursement rates among different third-party payers, as well as constant renegotiation of those reimbursement rates. We also are subject to audit by Medicare and the commercial insurers, which can result in the return of payments made to us under these programs. These variances in reimbursement rates and audit results could reduce our margins and thus our earnings.

The health care industry continues to undergo significant change as third-party payers' increase their efforts to control the cost, utilization and delivery of health care services. In an effort to address the problem of increasing health care costs, legislation has been proposed or enacted at both the Federal and state levels to regulate health care delivery in general and clinical laboratories in particular. Some of the proposals include managed competition, global budgeting and price controls. Changes that decrease reimbursement rates or coverage, or increase administrative burdens on billing third-party payers could reduce our revenues and increase our expenses.

**U.S. healthcare reform legislation may result in significant change and our business could be adversely impacted if we fail to adapt.**

Government oversight of and attention to the healthcare industry in the United States is significant and increasing. In March 2010, U.S. federal legislation was enacted to reform healthcare. The annual updates for clinical laboratory services through 2015, which are based on the Consumer Price Index for All Urban Consumers (CPI-U), are reduced by a multi-factor productivity adjustment and then by 1.75 percentage points. Based on these calculations, the Medicare Fee Schedule was reduced in calendar year 2011 by 1.75% and increased in calendar year 2012 by .65% and a decrease of 2.95% in calendar year 2013 Future reductions/increases may occur depending on percentage changes in the CPI-U. In 2013, 2012 and 2011, approximately 22%, 21% and 22% of our Clinical Lab's segment revenues were reimbursed by Medicare under the clinical laboratory fee schedule. The legislation imposes an excise tax on the seller for the sale of certain medical devices in the United States, including those purchased and used by laboratories, beginning in 2013. The legislation establishes the Independent Payment Advisory Board, which will be responsible, beginning in 2014, annually to submit proposals aimed at reducing Medicare cost growth while preserving quality. These proposals automatically will be implemented unless Congress enacts alternative proposals that achieve the same savings targets.

Further, the legislation calls for a Center for Medicare and Medicaid Innovation that will examine alternative payment methodologies and conduct demonstration programs. The legislation provides for extensive health insurance reforms, including the elimination of pre-existing condition exclusions and other limitations on coverage, fixed percentages on medical loss ratios, expansion in Medicaid and other programs, employer mandates, individual mandates, creation of state and regional health insurance exchanges, and tax subsidies for individuals to help cover the cost of individual insurance coverage. The legislation also permits the establishment of accountable care organizations, a new healthcare delivery model. While the ultimate impact of the legislation on the healthcare industry is unknown, it is likely to be extensive and may result in significant change. Our failure to adapt to these changes could have a material adverse effect on our business.

**Changes in provider mix, including continued growth in capitated managed-cost health care and changes in certain third party provider agreements could have a material adverse impact on the Company's net revenues and profitability.**

Certain third party provider companies have adopted national and regional programs which include multiple managed-care reimbursement models. If the Company is unable to participate in these programs or if the Company would lose a material contract, it could have a material adverse impact on the Company's net revenues and profitability.

The number of individuals covered under managed care contracts or other similar arrangements has grown over the past several years and may continue to grow in the future. In addition, Medicare and other government healthcare programs may continue to shift to managed care. Entities providing managed care coverage have reduced payments for medical services, including clinical laboratory services, in numerous ways such as entering into arrangements under which payments to a service provider are capitated, limiting testing to specified procedures, denying payment for services performed without prior authorization and refusing to increase fees for specified services. These trends reduce our revenues and limit our ability to pass cost increases to our customers. Also, if these or other managed care organizations do not select us as a participating provider, we may lose some or all of that business, which could have an adverse effect on our business, financial condition and results of operations.

**Because of competitive pressures, impacts of the economy on patient traffic at our customers and the complexity and expense of the billing process in our clinical laboratory business, we must obtain new customers while maintaining existing customers to grow our business.**

Intense competition in the clinical laboratory business, increasing administrative burdens upon the reimbursement process, reduced patient traffic, and reduced coverage and payments by insurers make it necessary for us to increase our volume of laboratory services. To do so, we must obtain new customers while retaining existing customers.

Our failure to attract new customers or the loss of existing customers or a reduction in business from those customers could significantly reduce our revenues and impede our ability to grow.

**Compliance with Medicare administrative policies, including those pertaining to certain automated blood chemistry profiles, may reduce the reimbursements we receive.**

Containment of health care costs, including reimbursement for clinical laboratory services, has been a focus of ongoing governmental activity. Clinical laboratories must bill Medicare directly for the services provided to Medicare beneficiaries and may only collect the amounts permitted under this fee schedule. Reimbursement to clinical laboratories under the Medicare Fee Schedule has been steadily declining since its inception. Because a significant portion of our costs is fixed, these Medicare reimbursement reductions and changes have a direct adverse effect on our net earnings and cash flows.

**Regulations requiring the use of "standard transactions" for healthcare services may negatively impact our profitability and cash flows.**

The administrative simplification provisions of the Health Insurance Portability and Accountability Act of 1996 and its implementing regulations, or HIPAA, were designed to improve the efficiency and effectiveness of the healthcare system by facilitating the electronic exchange of information in certain financial and administrative transactions while protecting the privacy and security of the information exchanged. The administrative simplification provisions address standards for electronic transactions, security regulations and privacy regulations.

The HIPAA transaction standards are complex, and subject to differences in interpretation by payers. For instance, some payers may interpret the standards to require us to provide certain types of information, including demographic information not usually provided to us by physicians. While most of our transactions are submitted and/or received in ANSI standard format, inconsistent application of transaction standards by some remaining payers or our inability to obtain certain billing information not usually provided to us by physicians could increase our costs and the complexity of billing. In addition, new requirements for additional standard transactions, such as claims attachments, could prove technically difficult, time-consuming or expensive to implement. We are working closely with our payers to establish acceptable protocols for claims submissions and with our industry trade association and an industry coalition to present issues and problems as they arise to the appropriate regulators and standards setting organizations.

**Compliance with the HIPAA security regulations and privacy regulations may increase our costs.**

The HIPAA privacy and security regulations establish comprehensive federal standards with respect to the uses and disclosures of protected health information by health plans, healthcare providers and healthcare clearinghouses (collectively referred to as "Covered Entities"). The HIPAA privacy and security regulations were recently amended by the Health Information Technology Act and its implementing regulations, or HITECH, to, among other things, expand the obligations of HIPAA to business associates (i.e., individuals or entities who perform services, other than treatment, on behalf of Covered Entities and receive protected health information in order to perform such services). The regulations establish a complex regulatory framework on a variety of subjects, including:

- the circumstances under which uses and disclosures of protected health information are permitted or required without a specific authorization by the patient, including but not limited to treatment purposes, activities to obtain payments for our services, and our healthcare operations activities;
- a patient's rights to access, amend and receive an accounting of certain disclosures of protected health information;
- requirements to notify individuals if there is a breach of their protected health information;
- the requirements for business associates and the terms of business associate agreements;
- the content of notices of privacy practices for protected health information and;
- administrative, technical and physical safeguards required of entities that use or receive protected health information.

We have implemented practices to meet the requirements of the HIPAA privacy and security regulations, and update these practices to comply with HITECH. HIPAA establishes a "floor" and do not supersede state laws that are more stringent. Therefore, we are required to comply with both federal privacy and security regulations and varying state privacy laws. In addition, for healthcare data transfers from other countries relating to citizens of those countries, we must comply with the laws of those other countries. The federal privacy regulations restrict our ability to use or disclose patient-identifiable laboratory data, without patient authorization, for purposes other than payment, treatment, healthcare operations and certain other specified disclosures such as public health and governmental oversight of the health care industry. The privacy and security regulations provide for significant fines and other penalties for wrongful use or disclosure of protected health information, including potential civil and criminal fines and penalties. Although the HIPAA statute and regulations do not expressly provide for a private right of damages, we also could incur damages under state laws to private parties for the wrongful use or disclosure of confidential health information or other private personal information.

Compliance with all of the HIPAA and HITECH regulations, including standard transactions, requires ongoing resources from all healthcare organizations, not just clinical laboratories. While we believe our total costs to comply with HIPAA will not be material to our operations or cash flows, new standard transactions and additional customer requirements resulting from different interpretations of the current regulations could impose additional costs on us.

**FDA regulation of laboratory-developed tests, analyte specific reagents, or genetic testing could lead to increased costs and delays in introducing new genetic tests.**

The FDA has regulatory responsibility over instruments, test kits, reagents and other devices used to perform diagnostic testing by clinical laboratories. In the past, the FDA has claimed regulatory authority over laboratory-developed tests, but has exercised enforcement discretion in not regulating tests performed by high complexity CLIA-certified laboratories. In December 2000, the HHS Secretary's Advisory Committee on Genetic Testing recommended that the FDA be the lead federal agency to regulate genetic testing. In late 2002, a new HHS Secretary's Advisory Committee on Genetics, Health and Society, or SACGHS, was appointed to replace the prior Advisory Committee. Ultimately, SACGHS decided that it would continue to monitor the progress of the federal agencies in the oversight of genetic technologies, but it did not believe that further action was warranted. In the meantime, the FDA is considering revising its regulations on analyte specific reagents, which are used in laboratory-developed tests, including laboratory-developed genetic testing. FDA interest in or actual regulation of laboratory-developed tests or increased regulation of the various medical devices used in laboratory-developed testing could lead to periodic inquiry letters from the FDA and increased costs and delays in introducing new tests, including genetic tests.

In the past, the clinical laboratory industry has received negative publicity. This publicity has led to increased legislation, regulation, and review of industry practices. These factors may adversely affect our ability to market our services, require us to change our services and increase the regulatory burdens under which we operate, further increasing the costs of doing business and adversely affecting our operating results. If we experience a significant disruption in our information technology systems, including our website, or if we fail to implement new systems and software successfully, our business could be adversely affected.

***Other risks relating to our business***

**If we fail to maintain or monitor our information systems our businesses could be adversely affected.**

We depend on information systems throughout our Company to control our Life Science manufacturing, inventory, distribution and website and the Clinical Lab processes for: processing orders, managing inventory, processing shipments to and collecting cash from our customers, responding to customer inquiries, contributing to our overall internal control processes, maintaining records of our property, plant and equipment, and recording and paying amounts due vendors and other creditors. If we were to experience a prolonged disruption in our information systems that involve interactions with customers and suppliers, it could result in the loss of sales and customers and/or increased costs, which could adversely affect our business.

**If we fail to attract and retain key personnel, including our senior management, our business could be adversely affected.**

Most of our products and services are highly technical in nature. In general, only highly qualified and trained scientists and technician personnel have the necessary skills to develop proprietary technological products and market our products, support our research and development programs and provide our Clinical Lab services.

In addition, some of our manufacturing, quality control, safety and compliance, information technology and e-commerce related positions are highly technical as well. Further, our sales personnel highly trained and are important to retaining and growing our businesses. Our success depends in large part upon our ability to identify, hire, retain and motivate highly skilled professionals.

We face intense competition for these professionals from our competitors, customers, marketing partners and other companies throughout the industries in which we compete. Since our inception we have successfully recruited and hired qualified key employees. Any failure on our part to hire, train, and retain a sufficient number of qualified professionals would seriously damage our business.

We depend heavily on the services of our senior management. We believe that our future success depends on the continued services of such management. Our business may be harmed by the loss of a significant number of our senior management in a short period of time.

**The insurance we purchase to cover our potential business risk may be inadequate.**

Although we believe that our present insurance coverage is sufficient to cover our current estimated exposures, we cannot assure that we will not incur liabilities in excess of our policy limits. In addition, although we believe that will be able to continue to obtain adequate coverage, we cannot assure that we will be able to do so at acceptable costs.

***Risks relating to our international operations***

**Foreign currency exchange rate fluctuations may adversely affect our business.**

Since we operate as a multinational corporation that sells and sources products in many different countries, changes in exchange rates could in the future, adversely affect our cash flows and results of operations.

Furthermore, reported sales and purchases made in non-U.S. currencies by our international businesses, when translated into U.S. dollars for financial reporting purposes, fluctuate due to exchange rate movement. Due to the number of currencies involved, the variability of currency exposures and the potential volatility of currency exchange rates, we cannot predict the effect of exchange rate fluctuations on future sales and operating results.

**We are subject to economic, political and other risks associated with our significant international business, which could adversely affect our financial results.**

We operate internationally primarily through wholly-owned subsidiaries located in North America and Europe. Revenues outside the United States were approximately 14% of total revenues in fiscal 2013. Our sales and earnings could be adversely affected by a variety of factors resulting from our international operations, including

- future fluctuations in exchange rates;
- complex regulatory requirements and changes in those requirements;
- trade protection measures and import or export licensing requirements;
- multiple jurisdictions and differing tax laws, as well as changes in those laws;
- restrictions on our ability to repatriate investments and earnings from foreign operations;
- changes in the political or economic conditions in a country or region, particularly in developing or emerging markets;
- changes in shipping costs; and
- difficulties in collecting on accounts receivable.

If any of these risks materialize, we could face substantial increases in costs, the reduction of profit and the inability to do business.

***Risks Relating to our Common Stock***

**Our stock price has been volatile, which could result in substantial losses for investors.**

Our common stock is quoted on the New York Stock Exchange, and there has been historical volatility in the market price of our common stock. The trading price of our common stock has been, and is likely to continue to be, subject to significant fluctuations due to a variety of factors, including:

- fluctuations in our quarterly operating and earnings per share results;
- the gain or loss of significant contracts;
- the carrying value of our goodwill and intangible assets;
- loss of key personnel;
- announcements of technological innovations or new products by us or our competitors;
- delays in the development and introduction of new products;
- legislative or regulatory changes;
- general trends in the industries we operate;
- recommendations and/or changes in estimates by equity and market research analysts;
- biological or medical discoveries;
- disputes and/or developments concerning intellectual property, including patents and litigation matters;
- public concern as to the safety of new technologies;
- sales of common stock of existing holders;
- securities class action or other litigation;
- developments in our relationships with current or future customers and suppliers and;
- general economic conditions, both in the United States and worldwide.

In addition, the stock market in general has experienced extreme price and volume fluctuations that have affected the market price of our common stock, as well as the stock of many companies in our industries. Often, price fluctuations are unrelated to operating performance of the specific companies whose stock is affected.

In the past, following periods of volatility in the market price of a company's stock, securities class action litigation has occurred against the issuing company. If we were subject to this type of litigation in the future, we could incur substantial costs and a diversion of our management's attention and resources, each of which could have a material adverse effect on our revenue and earnings. Any adverse determination in this type of litigation could also subject us to significant liabilities.

**Because we do not intend to pay cash dividends on our common stock, an investor in our common stock will benefit only if it appreciates in value.**

We currently intend to retain our retained earnings and future earnings, if any, to finance the expansion of our business and do not expect to pay any cash dividends on our common stock in the foreseeable future. As a result, the success of an investment in our common stock will depend entirely upon any future appreciation. There is no guarantee that our common stock will appreciate in value or even maintain the price at which investors purchased their shares.

**It may be difficult for a third party to acquire us, which could inhibit stockholders from realizing a premium on their stock price.**

We are subject to the New York anti-takeover laws regulating corporate takeovers. These anti-takeover laws prohibit certain business combinations between a New York corporation and any "interested shareholder" (generally, the beneficial owner of 20% or more of the corporation's voting shares) for five years following the time that the shareholder became an interested shareholder, unless the corporation's board of directors approved the transaction prior to the interested shareholder becoming interested.

Our certificate of incorporation, as amended, and by-laws contain provisions that could have the effect of delaying, deferring or preventing a change in control of us that stockholders may consider favorable or beneficial. These provisions could discourage proxy contests and make it more difficult for stockholders to elect directors and take other corporate actions. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock. These provisions include:

- a staggered board of directors, so that it would take three successive annual meetings to replace all directors; and
- advance notice requirements for the submission by stockholders of nominations for election to the board of directors and for proposing matters that can be acted upon by stockholders at a meeting.

**Future sales of shares of our common stock or the issuance of securities senior to our common stock could adversely affect the trading price of our common stock and our ability to raise funds in new equity offerings.**

We are not restricted from issuing additional common stock, preferred stock or securities convertible into or exchangeable for common stock. Future sales of a substantial number of our shares of common stock or equity-related securities in the public market or privately, or the perception that such sales could occur, could adversely affect prevailing trading prices of our common stock, and could impair our ability to raise capital through future offerings of equity or equity-related securities. No prediction can be made as to the effect, if any, that future sales of shares of common stock or the availability of shares of common stock for future sale will have on the trading price of our common stock.

***Risk relating to our debt***

**Our use of leverage may expose us to substantial risks, including interest rate risk.**

As of July 31, 2013, we had $3.3 million in borrowings under our Revolving Loan and Security Agreement ("credit agreement"). In addition, we may incur additional indebtedness in the future. Accordingly, we are exposed to the typical risks associated with the use of leverage. Increased leverage makes it more difficult for us to withstand adverse economic conditions or business plan variances, to take advantage of new business opportunities, or to make necessary capital expenditures. The existing credit agreement contains restrictive covenant restrictions that limit our ability to conduct our business, including restrictions on our ability to incur additional indebtedness. Our ability to maintain our compliance with these covenants is dependent on our financial performance, which is influenced by a number of factors. Violation of any of these covenants would result in an event of default under the credit agreement. Upon the occurrence of an event of default that is not cured or waived, the lender would have the ability to accelerate the repayment of all amounts then outstanding under the credit agreement. In the event of a default, and during the continuance of an event of default under the credit agreement, we would no longer have the right to borrow additional funds under the credit agreement. Under these circumstances, we may not be able to pay our debt or borrow sufficient funds to refinance it on terms that are acceptable to us or at all.

Our credit agreement requires the payment of interest based on 3 month LIBOR plus a fixed rate. Fluctuations in this variable interest rate could negatively impact our financial results.

Item 1B. Unresolved Staff Comments

None

Item 2. Properties

The following are the principal facilities of the Company:

| Location | Primary use | Segments | Leased / owned | Square footage |
|---|---|---|---|---|
| Farmingdale, NY (Note1) | Clinical laboratory and research | Clinical Labs | Leased | 43,000 |
| Farmingdale, NY | Manufacturing, research, sales and administrative office | Life Sciences, Therapeutics | Owned | 22,000 |
| New York, NY (Note 2) | Corporate headquarters | Other | Leased | 11,300 |
| Lausen, Switzerland (Note 3) | Operational headquarters in Europe, including sales and distribution | Life Sciences | Leased | 18,829 |
| Ann Arbor, Michigan (Note 4) | Manufacturing, research, and distribution | Life Sciences | Leased | 26,820 |

Note 1 – In March 2005, the Company amended and extended the lease for its Farmingdale laboratory for a period of 12 years (See Note 13 to the Consolidated Financial Statements).

Note 2 – In February 2010, the lease, which includes 4,100 square feet under a sublease rental agreement through December 31, 2014, was extended through May 2020.

Note 3 – The lease for this property was acquired in connection with the Axxora acquisition in May 2007 and was amended and extended through January 2015.

Note 4 – The lease for this property was acquired in connection with the Assay Designs acquisition in March 2009 and was amended and extended through April 2016.

We believe the current facilities are suitable and adequate for the Company’s current operating needs for its clinical laboratories, life science and therapeutics segments and that the production capacity in various locations is sufficient to manage product requirements.

Item 3. Legal Proceedings

The Company, as plaintiff, is currently engaged in litigation in the United States District Court for the Southern District of New York against six parties (and certain of their related companies): Amersham plc, Perkin Elmer, Inc., Molecular Probes, Inc., Orchid Biosciences, Inc., Affymetrix, Inc., and Roche Diagnostic GmbH ("Roche"). These cases were commenced at various times from October 2002 to June of 2004. In each of the six cases, the Company asserts similar (with some differences) causes of action against the defendants which can be generally described as contract, tort, fraud, and patent claims, except that no patent claims are asserted against Affymetrix. In the Roche case, Roche seeks a declaratory judgment of non-breach and patent invalidity against the Company. The cases were consolidated for pre-trial purposes in 2004 and there has been extensive discovery among the parties. In 2011, the defendants moved for summary judgment of non-infringement regarding the Company's patent claims. In 2012, those motions were granted in part and denied in part. In December 2012, all six defendants moved for summary judgment on the Company's non-patent claims. Additional discovery was taken and the Company responded to the motions in May 2013. Those motions are now fully briefed, but have not yet been decided. The Company expects that the pending motions will be decided prior to October 31, 2013.

On June 7, 2004, the Company and Enzo Life Sciences, Inc., filed suit in the United States District Court for the District of Connecticut against Applera Corporation and its wholly-owned subsidiary Tropix, Inc., now Life Technologies, Inc. (NASDAQ:LIFE). The complaint alleged infringement of six patents relating to DNA sequencing systems, labeled nucleotide products, and other technology. Yale University is the owner of four of the patents and the Company is the exclusive licensee. These four patents are commonly referred to as the "Ward" patents. On November 12, 2012, a jury in New Haven found that one of these patents (United States Patent No. 5,449,667) was infringed and not proven invalid. The jury awarded $48.5 million for this infringement. Prejudgment interest should provide for additional recovery in the tens of millions of dollars. Life Technologies will likely appeal and there can be no assurance that the Company will be successful in this litigation. Even if the Company is not successful, management does not believe that there will be a significant adverse monetary impact on the Company.

In 2012, the Company received a Subpoena Duces Tecum (the "Subpoena") from the federal Department of Health and Human Services, Office of Inspector General ("OIG"). The Subpoena was issued as part of an investigation being conducted by the US Attorney's Office for the Eastern District of New York in conjunction with the OIG. While a number of potential issues were raised initially by the government, the investigation has come to focus primarily on certain practices relating to an alleged failure to collect diagnosis codes from physicians who ordered tests from Enzo's Clinical Labs. The time period covered by the investigation is from 2004 through 2011. In response to the Subpoena, the Company is cooperating with the government and has provided documents as requested and no claim has yet been asserted by the OIG. The Company continues to review the methodologies around the matters raised as well as the facts that impact them. Due to the on-going review, various questions of fact and the continuing discussions with the government the Company is unable at this time to predict the outcome or estimate the potential impact that could result from the final resolution of the investigation.

The Company is party to other claims, legal actions, complaints, and contractual disputes that arise in the ordinary course of business. The Company believes that any liability that may ultimately result from the resolution of these matters will not, individually or in the aggregate, have a material adverse effect on its financial position or results of operations.

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 common stock of the Company is traded on the New York Stock Exchange (Symbol: ENZ). The following table sets forth the high and low price of the Company's common stock for the periods indicated as reported on the New York Stock Exchange.

2013 Fiscal Year (August 1, 2012 to July 31, 2013):

| | High | Low |
|---|---|---|
| 1st Quarter | $ 2.17 | $ 1.33 |
| 2nd Quarter | $ 3.16 | $ 1.86 |
| 3rd Quarter | $ 3.13 | $ 1.83 |
| 4th Quarter | $ 2.43 | $ 1.96 |

2012 Fiscal Year (August 1, 2011 to July 31, 2012):

| | High | Low |
|---|---|---|
| 1st Quarter | $ 3.93 | $ 2.05 |
| 2ndQuarter | $ 2.85 | $ 1.98 |
| 3rd Quarter | $ 3.15 | $ 2.13 |
| 4th Quarter | $ 2.80 | $ 1.43 |

As of September 30, 2013, the Company had approximately 913 stockholders of record of its common stock.

The Company has not paid a cash dividend on its common stock and intends to continue a policy of retaining earnings to finance and build its operations. Accordingly, the Company does not anticipate the payment of cash dividends to holders of common stock in the foreseeable future.

Item 6. Selected Financial Data

The following table, which is derived from the audited consolidated financial statements of the Company for the fiscal years 2009 through 2013 should be read together with the discussion in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Company's consolidated financial statements and notes to those statements included elsewhere in this Annual Report on Form 10-K.

| | For the fiscal year ended July 31, (In thousands, except per share amounts) | | | | |
|---|---|---|---|---|---|
| **Operating Results** | **2013** | **2012** | **2011** | **2010** | **(1) 2009** |
| Revenues | $ 93,707 | $ 103,083 | $ 102,029 | $ 97,082 | $ 89,572 |
| Impairment charges (2) | $ — | (24,540) | — | — | — |
| Operating loss | $ (18,980) | $ (40,479) | $ (12,928) | $ (22,058) | $ (23,407) |
| Net loss | $ (18,237) | $ (39,269) | $ (12,960) | $ (22,233) | $ (23,564) |
| Basic and diluted net loss per common share: | $ (0.46) | $ (1.01) | $ (0.34) | $ (0.59) | $ (0.63) |

| | July 31, (in thousands) | | | | |
|---|---|---|---|---|---|
| **Financial Position** | **2013** | **2012** | **2011** | **2010** | **2009** |
| Working capital | $ 8,704 | $ 21,412 | $ 33,670 | $ 42,181 | $ 60,518 |
| Total assets (2) | $ 58,958 | $ 69,123 | $ 109,474 | $ 115,245 | $ 133,128 |
| Stockholders' equity (2) | $ 34,132 | $ 49,101 | $ 88,715 | $ 97,016 | $ 116,781 |

**Notes to Selected Financial Data:**

(1) On March 12, 2009, Enzo Life Sciences Inc. acquired Assay Designs, Inc. ("ADI"). As such, the operating results of ADI are included in the consolidated operating results beginning March 12, 2009.

(2) In the fourth quarter of fiscal 2012, the Company recorded an impairment charge on goodwill and indefinite lived intangible assets (See Item 7, Management Discussion and Analysis of Financial Conditions and Results of Operations and Note 2 to the Consolidated Financial Statements),

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

The Company's Enzo Clinical Labs and Enzo Life Sciences reporting units, as described below, are affected by different US and global economic conditions which are included in Item 1A, Risk Factors.

The Clinical Lab reporting unit is impacted by various risk factors, including among others, reduced reimbursements from third party payers for testing performed and from recent health care legislation. Despite the growth we have experienced there can be no assurance future growth can be achieved. The introduction of new molecular and esoteric tests is expected to increase our revenue per test and could offset impacts from the above factors. The Company anticipates improved profitability with increased service volume. Clinical Labs experienced year over year growth in fiscal 2012 of 13% but experienced contraction in fiscal 2013 of 6%.

**Recent Actions**

On June 7, 2013, the Company entered into a secured Revolving Loan and Security Agreement (the "Credit Agreement") among the Company and certain of its subsidiaries, with Enzo Therapeutics as a guarantor, and Healthcare Finance Group, LLC (the "Lender).The Credit Agreement, which expires in December 2016, provides for borrowings against eligible US receivables, as defined, of the Clinical Lab and Life Science segments up to $8.0 million at defined eligibility percentages and provides for additional borrowings of $4.0 million for increased eligible assets. At July 31, 2013, the borrowings under the Credit Agreement related to the Clinical Lab receivables aggregated $3.3 million with an additional availability of $0.2 million. Commencement of borrowing against the eligible Life Science receivables requires advance notification to the Lender. (See Note 7 to the Consolidated Financial Statements and the liquidity and capital resources section).

We are comprised of three operating companies that have evolved out of our core competence: the use of nucleic acids as informational molecules and the use of compounds for immune modulation. These wholly-owned operating companies and the foreign subsidiaries of Enzo Life Sciences conduct their operations through three reportable segments. Below are brief descriptions of each of the three operating segments (see Note 15 in the Notes to Consolidated Financial Statements):

**Enzo Clinical Labs** is a regional clinical laboratory serving the greater New York, New Jersey and Eastern Pennsylvania medical communities. The Company believes having clinical diagnostic services allows us to capitalize firsthand on our extensive advanced molecular and cytogenetic capabilities and the broader trends in predictive and personalized diagnostics. We offer a menu of routine and esoteric clinical laboratory tests or procedures used in general patient care by physicians to establish or support a diagnosis, monitor treatment or medication, or search for an otherwise undiagnosed condition. We operate a full-service clinical laboratory in Farmingdale, New York, a network of approximately 30 patient service centers throughout greater New York, New Jersey and Eastern Pennsylvania, a standalone "stat" or rapid response laboratory in New York City, and a full-service phlebotomy and an in-house logistics department. Payments for clinical laboratory testing services are made by the Medicare program, healthcare insurers and patients.

**Enzo Life Sciences** manufactures, develops and markets products and tools to life sciences, drug development and clinical research customers world-wide and has amassed a large patent and technology portfolio. Enzo Life Sciences, Inc. is a recognized leader in labeling and detection technologies across research and diagnostic markets. Our strong portfolio of proteins, antibodies, peptides, small molecules, labeling probes, dyes and kits provides life science researchers tools for target identification/validation, high content analysis, gene expression analysis, nucleic acid detection, protein biochemistry and detection, and cellular analysis. We are internationally recognized and acknowledged as a leader in manufacturing, in-licensing, and commercialization of over 7,500 of our own products and in addition distribute over 30,000 products made by over 40 other original manufacturers. Our strategic focus is directed to innovative high quality research reagents and kits in the primary key research areas of genomics, cellular analysis, small molecule chemistry, protein homeostasis and epigenetics and immunoassays and assay development. The segment is an established source for a comprehensive panel of products to scientific experts in the fields of cancer, cardiovascular disease, neurological disorders, diabetes and obesity, endocrine disorders, infectious and autoimmune disease, hepatotoxicity and renal injury.

**Enzo Therapeutics** is a biopharmaceutical company that has developed multiple novel approaches in the areas of gastrointestinal, infectious, ophthalmic and metabolic diseases, many of which are derived from the pioneering work of Enzo Life Sciences. The Company has focused its efforts on developing treatment regimens for diseases and conditions in which current treatment options are ineffective, costly, and/or cause unwanted side effects. This focus has generated a clinical and preclinical pipeline, as well as more than 45 patents and patent applications.

The following table summarizes the sources of revenues for the fiscal years ended July 31, 2013, 2012 and 2011, (in $000's and percentages):

| **Fiscal year ended July 31,** | **2013** | | **2012** | | **2011** | |
|---|---|---|---|---|---|---|
| Clinical laboratory services | $ 55,889 | 59% | $ 59,403 | 58% | $ 52,762 | 52% |
| Product revenues | 32,526 | 35 | 37,722 | 37 | 41,830 | 41 |
| Royalty and license fee income | 5,292 | 6 | 5,958 | 5 | 7,437 | 7 |
| Total | $ 93,707 | 100% | $ 103,083 | 100% | $ 102,029 | 100% |

***Results of Operations***
***Fiscal year ended July 31, 2013 compared to July 31, 2012***
***(in 000s)***

Comparative Financial Data for the Fiscal Years Ended July 31,

| | 2013 | 2012 | Increase (Decrease) | % Change |
|---|---|---|---|---|
| Revenues: | | | | |
| Clinical laboratory services | $ 55,889 | $ 59,403 | $ (3,514) | (6)% |
| Product revenues | 32,526 | 37,722 | (5,196) | (14) |
| Royalty and license fee income | 5,292 | 5,958 | (666) | (11) |
| Total revenues | 93,707 | 103,083 | (9,376) | (9) |
| | | | | |
| Operating expenses: | | | | |
| Cost of clinical laboratory services | 38,251 | 36,305 | 1,946 | 5 |
| Cost of product revenues | 16,584 | 19,668 | (3,084) | (16) |
| Research and development | 3,889 | 6,293 | (2,404) | (38) |
| Selling, general, and administrative | 43,654 | 47,928 | (4,274) | (9) |
| Provision for uncollectible accounts receivable | 4,496 | 5,104 | (608) | (12) |
| Legal | 5,813 | 3,724 | 2,089 | 56 |
| Impairment charges | — | 24,540 | (24,540) | (100) |
| Total operating expenses | 112,687 | 143,562 | (30,875) | (22) |
| | | | | |
| Operating loss | (18,980) | (40,479) | (21,499) | (53) |
| | | | | |
| Other income (expense): | | | | |
| Interest | (54) | 21 | (75) | (357) |
| Other | 5 | 77 | (72) | (94) |
| Foreign currency gain (loss) | 80 | (540) | 620 | 115 |
| Loss before income taxes | $ (18,949) | $ (40,921) | $ (21,972) | 54 |

**Consolidated Results:**

The “2013 period” and the “2012 period” refer to the Fiscal Year ended July 31, 2013 and 2012, respectively.

Clinical laboratory services revenues for the 2013 period were $55.9 million compared to $59.4 million in the 2012 period. The 2013 period’s decrease over the 2012 period was $3.5 million or 6%. During the 2013 period revenues were negatively impacted by lower reimbursement rates from certain payers of $2.2 million, net of organic growth, and by approximately $1.3 million due to a severe storm affecting our service area in the last three days of the first quarter and the first week of the second quarter.

Product revenues were $32.5 million as compared to $37.7 million in the 2012 period, a decrease of $5.2 million or 14%. During the 2013 period we continued to experience a decline attributed to certain distributed products for certain customer types and declines in resale products due to market softness in research reagent products partially due to reduced government funding.

Royalty and license fee income during the 2013 period was $5.3 million compared to $6.0 million in the 2012 period a decrease of $0.7 million or 11%. Royalties are primarily earned from the reported sales of Qiagen products subject to a license agreement. There are no direct expenses relating to royalty and licensing income.

The cost of clinical laboratory services during the 2013 period was $38.2 million as compared to $36.3 million in the 2012 period, an increase of $1.9 million or 5%. The Company incurred increased costs due to increased payroll costs of $0.3 million, higher reagent costs and supplies of $0.3 million, higher outside reference lab costs of $0.8 million and other lab support costs of $0.5 million. Certain increases are affected by the changes in the mix of tests offered to the ordering physician.

The cost of product revenues during the 2013 period was $16.6 million compared to $19.7 million in the 2012 period, a decrease of $3.1 million or 16%.The decrease is primarily attributed to lower payroll and related costs of $1.1 million due to the business realignments during fiscal 2012, $0.2 million in lower overhead costs and $0.2 depreciation costs, and the balance attributed to lower product revenues.

Research and development expenses were approximately $3.9 million during the 2013 period, compared to $6.3 million in the 2012 period, a decrease of $2.4 million or 38%. The decrease was principally attributed to lower costs of $2.0 million at the Enzo Life Sciences segment due to lower payroll and related costs of $1.0 million, lower patent filing costs of $0.3 million, lower material costs of $0.3 million and lower overhead costs of $0.4 million due to a refocus of projects. The clinical trial and related activities at the Therapeutics segment decreased by $0.4 million due to lower payroll and related costs and patent filing fees as compared to the 2012 period.

The Company's selling, general and administrative expenses were approximately $43.7 million during the 2013 period and $47.9 million during the 2012 period, a decrease of $4.3 million or 9%.The Enzo Life Sciences segment selling, general and administrative decreased by $2.8 million due to lower payroll and related costs of $1.8 million, rent and facility costs of $0.5 million, travel costs of $0.3 million and $0.5 million in other operating costs primarily resulting from the positive effects from the business realignments in fiscal 2012 which continued into fiscal 2013, offset by higher depreciation and amortization of $0.3 million. The Clinical Lab segment selling general and administrative decreased by $0.9 million primarily due to a decrease in personnel related costs of $1.2 million, of which $0.3 million is attributed to lower service volume, offset by increases in information processing costs of $0.3 million. The Other selling general and administrative decreased by $0.6 million, primarily due to a decrease of $0.4 million in compensation and related expenses and decreases of $0.1 in professional fees and $0.1 decreases in consulting costs. Such decreases in the Other were part of the planned expense reductions in the 2013 period.

The provision for uncollectible accounts receivable primarily related to the Clinical Labs segment, was $4.5 million for the 2013 period as compared to $5.1 million in the 2012 period. The decrease of $0.6 million was due to decreases of $0.8 million at Clinical Labs due to the change in the mix of payers and improved collection procedures offset by increases of $0.2 million at Life Sciences. As a percentage of revenues the provision for uncollectible accounts receivable for the Clinical Lab segment decreased to 7.6% from 8.4% in the 2012 period.

Legal expense was $5.8 million during the 2013 period compared to $3.7 million in the 2012 period, an increase of $2.1 million due to overall increases in legal services in the 2013 period primarily related to a patent litigation trial and other patent litigation related matters.

During the 2012 period the Company recorded a pre-tax non-cash impairment charges of $24.5 million related to US and foreign goodwill and trademarks carried in the Life Sciences segment. The charges resulted in a deferred tax benefit of approximately $2.1 million, bringing the impact of the charge, net of the tax benefit, to $22.4 million.

During the 2013 period, the gain on foreign currency transactions was $0.1 million as compared to a loss of $0.5 million in the 2012 period. During the 2013 period, the Company recognized remeasurement gains because of Swiss franc depreciation versus the euro and Great British pound. During the 2012 period, the foreign currencies experienced depreciation against the Swiss franc and US dollar.

**Segment Results**

**Clinical Labs**

The Clinical Labs segment's loss before taxes was $7.1 million for the 2013 period as compared to a loss of $3.3 million in the 2012 period, an increase of $3.8 million resulting from increased operating costs and decreased service volume. The revenue from laboratory services decreased in the 2013 period by $3.5 million due to the impact of lower reimbursements rates from certain payers of $2.2 million, net of organic growth, and approximately $1.3 million due to a severe storm affecting our service area. As a result of these revenue impacts, the 2013 period gross profit of $17.6 million decreased from the 2012 period by $5.5 million. Selling, general and administrative expense decreased by approximately $0.9 million primarily due to decreases in personnel costs of $1.2 million offset by increases in other costs of $0.3 million. The provision for uncollectible accounts receivable decreased by $0.8 million as compared to the 2012 period due to the improved implemented collection procedures and changes in the mix of payers and as a percentage of revenues decreased to 7.6% from 8.4% in the 2012 period.

**Life Sciences**

The Life Sciences segment's income before taxes was $3.1 million for the 2013 period as compared to $24.3 million loss for the 2012 period. During the 2012 period the Company recorded pre-tax non-cash impairment charges of $24.5 million related to US and foreign goodwill and trademarks. Excluding the aforementioned impairment charges the segment would have had income before income taxes of $0.3 million in the 2012 period.

Product revenues decreased by $5.2 million or 14% in the 2013 period to $32.5 million as compared to $37.7 million in the 2012 period due to a continued decline attributed to certain distributed products for certain customer types and declines in resale products due to market softness in research reagent products. Royalty and license fee income of $5.3 million represented a decrease of $0.7 million as compared to the 2012 period and is primarily from the reported net sales of Qiagen products subject to a license agreement. The segment's gross profit was $21.2 million in the 2013 period, as compared to $24.0 million in the 2012 period. Gross profit was negatively impacted by the decline in product revenues, offset by reduced payroll, facility and other costs resulting from realignments during fiscal 2012 and continuing into fiscal 2013. The segment's other operating expenses, including selling, general and administrative, legal, provision for uncollectible accounts and research and development, decreased by approximately $5.1 million during the 2013 period due to reduced research and development and selling, general and administrative of $4.8 million and lower legal of $0.5 million offset by an increase in provision for uncollectible accounts of $0.2. Due to the strengthening of foreign currencies versus the Swiss franc during the 2013 period as compared to the 2012 period, the foreign currency gain was $0.1 million as compared to a loss of $0.5 million in the 2012 period.

**Therapeutics**

Therapeutics loss before income taxes was approximately $1.2 million for the 2013 period as compared to $1.7 million in 2012 period primarily due to lower payroll costs of $0.3 million and lower materials and overhead costs of $0.1 million.

**Other**

The Other loss before taxes for the 2013 period was approximately $13.6 million as compared to $11.7 million for the 2012 period, an increase of $1.9 million. In the 2013 period legal expenses increased by $2.5 million due to overall increases in legal services directly related to a patent litigation trial and other legal activities. General and administrative costs decreased by $0.6 million due to lower compensation and related costs and other costs.

***Results of Operations***
***Fiscal year ended July 31, 2012 compared to July 31, 2011***
***(in 000's)***

**Comparative Financial Data for the Fiscal Years Ended July 31,**

| | 2012 | 2011 | Increase (Decrease) | % Change |
|---|---|---|---|---|
| Revenues: | | | | |
| Clinical laboratory services | $ 59,403 | $ 52,762 | $ 6,641 | 13% |
| Product revenues | 37,722 | 41,830 | (4,108) | (10) |
| Royalty and license fee income | 5,958 | 7,437 | (1,479) | (20) |
| Total revenues | 103,083 | 102,029 | 1,054 | 1 |
| Operating expenses: | | | | |
| Cost of clinical laboratory services | 36,305 | 31,682 | 4,623 | 15 |
| Cost of product revenues | 19,668 | 22,137 | (2,469) | (11) |
| Research and development | 6,293 | 7,806 | (1,513) | (19) |
| Selling, general, and administrative | 47,928 | 45,191 | 2,737 | 6 |
| Provision for uncollectible accounts receivable | 5,104 | 4,431 | 673 | 15 |
| Legal | 3,724 | 3,710 | 14 | — |
| Impairment charges | 24,540 | — | 24,540 | — |
| Total operating expenses | 143,562 | 114,957 | 28,605 | 25 |
| Operating loss | (40,479) | (12,928) | (27,551) | (213) |
| Other income (expense): | | | | |
| Interest | 21 | 11 | 10 | 91 |
| Other | 77 | 45 | 32 | 71 |
| Foreign exchange gain (loss) | (540) | 49 | (589) | — |
| Loss before income taxes | $ (40,921) | $ (12,823) | $ (28,098) | 219 |

**Consolidated Results:**

The "2012 period" and the "2011 period" refer to the Fiscal year ended July 31, 2012 and 2011, respectively.

Clinical laboratory services revenue during the 2012 period were $59.4 million compared to $52.8 million in the 2011 period. The 2012 period's increase over the 2011 period was $6.6 million or 13% due to organic growth.

Product revenues decreased by $4.1 million or 10% in the 2012 period to $37.7 million as compared to $41.8 million in the 2011 period due to a decline in organic sales. During the 2012 period we experienced a decline attributed to certain distributed products for certain customer types and declines in resale products due to market softness in research reagent products.

Royalty and license fee income during the 2012 period was $6.0 million compared to $7.5 million in the 2011 period, a decrease of $1.5 million or 20%. Royalties were primarily earned from the reported sales of Qiagen products subject to a license agreement. During the 2012 period the Qiagen royalties decreased by $0.8 million as compared to the 2011 period, to $5.9 million as a result of lower reported sales from Qiagen. The 2012 period decrease is also due to Abbott's notification in the 2011 period that they had made a final payment under a license agreement, which aggregated $0.5 million, since they were not aware of any non-expired patents covered under the license agreement. Other royalties declined $0.1 million. There are no direct expenses relating to royalty and licensing income.

The cost of clinical laboratory services during the 2012 period was $36.3 million as compared to $31.7 million in the 2011 period, an increase of $4.6 million or 15%. The Company incurred increased costs in the 2012 period due to higher reagent costs and supplies of $1.7 million, higher laboratory personnel costs and related costs of $1.1 million, higher outside reference lab costs of $1.1 million and other lab costs of $0.7 million, all attributed to the increased service volume and higher employee benefit costs. In the 2012 period the gross profit margin decreased to 39% from 40% in the 2011 period due to the increased costs.

The cost of product revenues during the 2012 period was $19.6 million compared to $22.1 million in the 2011 period, a decrease of $2.5 million or 11%. The decrease is primarily due to lower revenues and decreases to manufacturing costs.

Research and development expenses were approximately $6.3 million during the 2012 period, compared to $7.8 million in the 2011 period, a decrease of $1.5 million or 19%. The decrease was attributed to lower costs of $1.5 million at Enzo Life Sciences principally due to lower payroll of $0.9 million, overhead costs of $0.4 million due to integration of facilities and lower patent related costs of $0.2 million. Research and development for the Clinical Labs segment, which commenced in the 2012 period, was $0.3 million. The Therapeutics segment expense decreased by $0.3 million as compared to the 2011 period primarily due the recognition of deferred revenue from a research grant.

Selling, general and administrative expenses were approximately $48.0 million during the 2012 period as compared to $45.2 million in the 2011 period, an increase of $2.7 million or 6%. The Clinical Lab segment's selling general and administrative increased by $2.4 million primarily due to an increase in sales commissions of $0.5 million, an increase in other expenses of $1.9 million, including among others payroll and related benefits, severance costs, rent and repairs and maintenance for patient collection centers, phones, and billing support, all related to the increased revenue volume. The Life Sciences segment selling general and administrative increased by $0.4 million due to a $0.5 million increase in compensation costs for existing personnel and for new hires of senior level marketing personnel in the latter half of fiscal 2011, and an increase in overhead costs of approximating $0.3 million, partially offset by a decrease of $0.4 million in compensation costs for administrative personnel due to headcount reduction. The Other selling general and administrative decreased by $0.1 million, primarily due to decreases in compensation and related costs and other employee benefit costs of $0.5 million offset by increases in professional fees of $0.4 million.

The provision for uncollectible accounts receivable, primarily relating to the Clinical Labs segment, was $5.1 million for the 2012 period as compared to $4.4 million in the 2011 period primarily due to the increase in service volume. As a percentage of revenues the provision for uncollectible accounts receivable for the Clinical Labs segment approximated 8.4% in both periods.

Legal expense was $3.7 million during the 2012 and 2011 periods relating to general legal services, patent and litigation related matters.

During the 2012 period, the Company recorded pre-tax non-cash impairment charges of $24.5 million related to US and foreign goodwill and trademarks carried in the Life Sciences segment. The charges resulted in a deferred tax benefit of approximately $2.1 million, bringing the impact of the charges, net of the tax benefit, to $22.4 million (See Note 2 to the Consolidated Financial Statements).

During the 2012 period, the loss on foreign currency transactions was $0.5 million compared to income of $0.1 million in the 2011 period. The loss in the 2012 period was due to the weakening of foreign currencies relative to the US dollar and the impact that had principally on intercompany loans denominated in foreign currencies.

**Segment Results**

**Clinical Labs**

The Clinical Labs segment's loss before taxes was $3.3 million for the 2012 period as compared to a loss of $2.1 million in the 2011 period, an increase of $1.2 million. The revenue from laboratory services increased in the 2012 period by $6.6 million or 13% due to organic growth. The 2012 period gross profit of $23.1 million increased over the 2011 period by $2.0 million or 10% due to increases in service revenues and cost of lab services. Selling, general and administrative expense increased by approximately $2.4 million primarily due to increases in sales commissions directly the result of increased service revenues and other costs associated with the increased volume. The provision for uncollectible accounts receivables increased by $0.6 million as compared to the 2011 period due to the increase in service volume but as a percentage of revenues was approximately 8.4% in both the 2012 and 2011 periods. Research and development, which commenced in the 2012 period, was $0.3 million.

**Life Sciences**

The Life Sciences segment's (loss) income before taxes was ($24.3) million for the 2012 period, which includes a non-cash impairment charge of $ 24.5 million related to goodwill and trademarks, as compared to income before taxes of $2.8 million for the 2011 period. Company product revenues decreased by $4.1 million or 10% in the 2012 period primarily due to a decline in sales of certain distributed products for certain customer types and declines in resale products due to market softness in research reagent products. Further, royalty and license fee income decreased by $1.5 million in the 2012 period attributed to a decrease in royalties of $0.8 million from the reported sales of Qiagen products subject to a license agreement, as previously discussed, and in addition, no royalty payments were received under another license agreement after the first quarter of the 2011 period. The segment's gross profit of $24.0 million in the 2012 period, as compared $27.1 million in the 2011 period, was negatively impacted by the previously discussed changes in revenues. The segment's gross profit percentage was 55% in the 2012 and 2011 periods. The segment's other operating expenses, including selling, general and administrative, legal and research and development, decreased by approximately $1.2 million during the 2012 period primarily due to reduced research and development costs of $1.4 million and decreased legal cost of $0.2 million, offset by higher compensation of $0.1 million and higher overhead of $0.3 million.

**Therapeutics**

The Therapeutics segment's loss before income taxes was approximately $1.7 million in the 2012 and $2.0 in 2011 period. The decline was due to the recognition of deferred revenue from a research grant of $0.4 million offset by other increases of $0.1 million.

**Other**

The Other loss before taxes for the 2012 period was approximately $11.7 million as compared to $11.5 million the 2011 period. In the 2012 period, legal expenses increased by $0.3 million, and general and administrative costs relating to compensation costs and other employee benefit costs decreased by $0.5 million offset by an increase in professional fees of $0.4 million.

**Liquidity and Capital Resources**

At July 31, 2013, the Company had cash and cash equivalents of $9.0 million of which $1.5 million was in foreign accounts, as compared to cash and cash equivalents of $15.1 million, of which $2.5 million was in foreign accounts at July 31, 2012. It is the Company's current intent to permanently reinvest these funds outside of the United States, and its current plans do not demonstrate a need to repatriate them to fund its United States operations. The Company had working capital of $8.7 million at July 31, 2013 compared to $21.4 million at July 31, 2012. The decrease in working capital of $12.7 million was primarily the result of the net loss and funding capital expenditures offset by changes in net operating assets and liabilities.

Net cash used in operating activities for the year ended July 31, 2013 was approximately $10.0 million as compared to $6.0 million for the year ended July 31, 2012. The increase in net cash used in operating activities in the 2013 period over the 2012 period of approximately $4.0 million was primarily due to a decrease in the net loss of $21.0 million offset by a decrease in non-cash charges of $24.4 million (primarily the fiscal 2012 impairment charges of $24.5 million) and by changes in operating assets and liabilities of $0.6 million, relating primarily to an increase in accounts receivable and increases in current liabilities.

Net cash used in investing activities was approximately $1.0 million as compared to cash provided of $7.5 million in the year ago period. The decrease in the 2013 period of $8.5 million is primarily due to $10 million in maturities of short-term investments in 2012 offset by an earn out payment of $1.1 million made in the 2012 period and $0.4 million of lower capital expenditures.

On June 7, 2013, the Company entered into a secured Revolving Loan and Security Agreement (the "Credit Agreement") among the Company and certain of its subsidiaries, with Enzo Therapeutics as a guarantor, and Healthcare Finance Group, LLC (the "Lender).The Credit Agreement, which expires in December 2016, provides for borrowings against eligible US receivables, as defined, of the Clinical Labs and Life Sciences segments up to $8.0 million at defined eligibility percentages and provides for additional borrowings of $4.0 million for increased eligible assets. At July 31, 2013, the borrowings under the Credit Agreement related to the Clinical Labs receivables aggregated $3.3 million with an additional availability of $0.2 million. Commencement of borrowing against the eligible Life Sciences receivables requires advance notification to the Lender. As of July 31, 2013, the Company received a waiver from the Lender for non-compliance with a financial covenant and the lender modified various financial covenants relating to fiscal 2014. In fiscal 2014, the Company expects to be in compliance with the modified financial covenants.

As previously disclosed in the Company's Form 10-K for the year ended July 31, 2012, in the fourth quarter of fiscal 2012 the Company completed a review of all operating units and expected to reduce annual cash expenditures by $6.0 million in fiscal 2013 based on actions completed by September 1, 2012 which included, among other items, a realignment of our workforce, final integration of the acquired businesses at Life Sciences, rationalization of low margin products, a refocus of our research and development program toward higher value diagnostic platforms and the reduction in outside consulting costs. For the year ended July 31, 2013, the Company realized the aforementioned cost reductions in annual expenditures however; such reductions were partially offset by higher than expected legal costs of approximately $2.1 million relating to patent litigation matters. The Company will continue to review all operating units and expects to further reduce annual operating expenditures in fiscal 2014. While revenues at the Life Sciences has continued to decline the operating results have improved, although there can be no assurance that Life Sciences will be able to sustain these results and if not, it may be required to record an impairment of intangibles and long lived assets. Despite the challenging global economic environment, declining revenues in the Life Sciences reporting unit in fiscal 2013 attributed to macroeconomic concerns and customer research budgets, impacts of healthcare reform regulations and changes in payer policies affecting reimbursements to providers and the funding of research projects, the Company believes that its current cash and cash equivalents level, utilization of the Controlled Equity Offering program disclosed in Note 10, which has resulted in net proceeds of $1.5 million subsequent to July 31, 2013, and available borrowings under the aforementioned Revolving Loan and Security Agreement disclosed in Note 7 are sufficient for its foreseeable liquidity and capital resource needs over the next twelve (12) months, although there can be no assurance that future events will not alter such view. Although there can be no assurances, in the event additional capital is required, the Company believes it has the ability to raise additional funds through equity offerings or other sources of funds. Our liquidity plans are subject to a number of risks and uncertainties, including those described in the Item 1A. "Risk Factors" section of this Form 10-K for the year ended July 31, 2013, some of which are outside our control. Macroeconomic conditions could limit our ability to successfully execute our business plans and therefore adversely affect our liquidity plans.

See in this Form 10-K for the fiscal year ended July 31, 2013 Part 1. Item 1. *Business*, for Forward Looking Cautionary Statements.

***Effect of New Accounting Pronouncements***

In June 2011, the FASB issued Accounting Standards Update No. 2011-05, “Comprehensive Income” (Topic 220) – Presentation of Comprehensive Income” (ASU No. 2011-05), which requires an entity to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. ASU 2011-05 eliminated the option to present the components of other comprehensive income as part of the statement of stockholders’ equity. The Company adopted ASU 2011-05 in its first quarter of fiscal year 2013 by including the required disclosures in two separate but consecutive statements.

In September 2011, the FASB issued Accounting Standards Update No. 2011-08 “Testing Goodwill for Impairment” (ASU No. 2011-08) which is intended to reduce the complexity and costs to test goodwill for impairment. The amendment allows an entity the option to make a qualitative evaluation about the likelihood of goodwill impairment to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. An entity will no longer be required to calculate the fair value of a reporting unit unless the entity determines, based on its qualitative assessment, that it is more likely than not that the fair value of the reporting unit is less than its carrying amount. The ASU also expands upon the examples of events and circumstances that an entity should consider between annual impairment tests in determining whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. The amendment became effective for annual and interim goodwill impairment tests performed for the Company’s fiscal year beginning August 1, 2012. The Company adopted ASU 2011-08 in the first quarter of fiscal 2013 and adoption did not have a material impact on its consolidated financial statements.

In July 2011, the FASB issued ASU No. 2011-07 “Health Care Entities (Topic 954) - Presentation and Disclosure of Patient Service Revenue, Provision for Bad Debts, and the Allowance for Doubtful Accounts for Certain Health Care Entities”. This update was issued to provide greater transparency relating to accounting practices used for net patient service revenue and related bad debt allowances by health care entities. Some health care entities recognize patient service revenue at the time the services are rendered regardless of whether the entity expects to collect that amount or has assessed the patient’s ability to pay. These prior accounting practices used by some health care entities resulted in a gross-up of patient service revenue and the provision for bad debts, causing difficulty for users of financial statements to make accurate comparisons and analyses of financial statements among entities. ASU No. 2011-07 requires certain healthcare entities to change the presentation of the statement of operations, reclassifying the provision for bad debts associated with patient service revenue from an operating expense to a deduction from patient service revenue and also requires enhanced quantitative and qualitative disclosures relevant to the entity’s policies for recognizing revenue and assessing bad debts. This update is not designed to change and will not change the net income reported by healthcare entities. The Company adopted this update in its first quarter of fiscal year 2013 with no impact on its consolidated financial position or results of operations.

In July 2012, the FASB issued ASU 2012-02, “Intangibles - Goodwill and Other (Topic 350): Testing Indefinite-Lived Intangible Assets for Impairment” (ASU 2012-02), which permits an entity to make a qualitative assessment of whether it is more likely than not that the fair value of a reporting unit’s indefinite-lived intangible asset is less than the asset’s carrying value before applying the two-step goodwill impairment model that is currently in place. If it is determined through the qualitative assessment that the fair value of a reporting unit’s indefinite-lived intangible asset is more likely than not greater than the asset’s carrying value, the remaining impairment steps would be unnecessary. The qualitative assessment is optional, allowing companies to go directly to the quantitative assessment. ASU 2012-02 is effective for the Company for annual and interim indefinite-lived intangible asset impairment tests performed beginning August 1, 2013, however early adoption is permitted. The Company is currently evaluating the impact ASU 2012-02 will have on its consolidated financial statements.

***Contractual Obligations***

The Company has entered into various real estate and equipment operating leases and has employment agreements with certain executive officers. The real estate lease for the Company’s Farmingdale Clinical Lab and Research facility is with a related party. See Item 2, Properties, and Note 13 to the Consolidated Financial Statements for a further description of these various leases.

The following is a summary of future payments under the Company’s contractual obligations as of July 31, 2013:

Payments Due by Period

| In 000's | Total | Less than 1 year | 1-3 years | 4-5 years | More than 5 years |
|---|---|---|---|---|---|
| Current and Long term Debt Obligations | $ 3,714 | $ 1,446 | $ 212 | $ 2,056 | $ — |
| Capital Lease Obligations | 732 | 176 | 352 | 204 | — |
| Operating Lease Obligations | 19,180 | 4,346 | 7,973 | 4,345 | 2,516 |
| Employment agreements | 2,271 | 1,048 | 1,223 | — | — |
| Total | $ 25,897 | $ 7,016 | $ 9,760 | $ 6,605 | $ 2,516 |

Management is not aware of any material claims, disputes or settled matters concerning third-party reimbursements that would have a material effect on our financial statements.

**Off-Balance Sheet Arrangements**

The Company does not have any "off-balance sheet arrangements" as such term is defined in Item 303(a) (4) of Regulation S-K.

**Critical Accounting Policies**

*General*

The Company's discussion and analysis of its financial condition and results of operations are based upon Enzo Biochem, Inc. consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. These estimates and judgments also affect related disclosure of contingent assets and liabilities.

On an on-going basis, we evaluate our estimates, including those related to contractual expense, allowance for uncollectible accounts, inventory, intangible assets and income taxes. The Company bases its estimates on experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

*Product revenues*

Revenues from product sales are recognized when the products are shipped and title transfers, the sales price is fixed or determinable and collectability is reasonably assured.

*Royalties*

Royalty revenues are recorded in the period earned. Royalties received in advance of being earned are recorded as deferred revenues.

*Revenues - Clinical laboratory services*

Revenues from the Clinical Labs segment are recognized upon completion of the testing process for a specific patient and reported to the ordering physician. These revenues and the associated accounts receivable are based on gross amounts billed or billable for services rendered, net of a contractual adjustment, which is the difference between amounts billed to payers and the expected approved reimbursable settlements from such payers.

The following table represents the Clinical Labs segment's net revenues and percentages by revenue category:

| | Year ended July 31 2013 | | Year ended July 31 2012 | | Year ended July 31 2011 | |
|---|---|---|---|---|---|---|
| **Revenue category** | **(In 000's)** | **(in %)** | **(In 000's)** | **(in %)** | **(In 000's)** | **(in %)** |
| Medicare | $ 12,497 | 22 | $ 12,658 | 21 | $ 11,856 | 22 |
| Third-party payers | 26,014 | 47 | 29,616 | 50 | 24,335 | 46 |
| Patient self-pay | 12,172 | 22 | 11,895 | 20 | 11,554 | 22 |
| HMO's | 5,206 | 9 | 5,234 | 9 | 5,017 | 10 |
| Total | $ 55,889 | 100% | $ 59,403 | 100% | $ 52,762 | 100% |

The Company provides services to certain patients covered by various third-party payers, including the Federal Medicare program. Laws and regulations governing Medicare are complex and subject to interpretation for which action for noncompliance includes fines, penalties and exclusion from the Medicare programs. See Item 3. Legal Proceedings.

Other than the Medicare program, one provider whose programs are included in the "Third-party payers" and "Health Maintenance Organizations" ("HMO's") categories represent approximately 22%, 21% and 22% of the Clinical Labs segment net revenue for the years ended July 31, 2013, 2012 and 2011 respectively. Another third party provider represents 9%, 13% and 11% of the Clinical Labs segment's net revenue for the years ended July 31, 2013, 2012 and 2011, respectively.

*Contractual Adjustment*

The Company's estimate of contractual adjustment is based on significant assumptions and judgments, such as its interpretation of payer reimbursement policies, and bears the risk of change. The estimation process is based on the experience of amounts approved as reimbursable and ultimately settled by payers, versus the corresponding gross amount billed to the respective payers. The contractual adjustment is an estimate that reduces gross revenue based on gross billing rates, to amounts expected to be approved and reimbursed. Gross billings are based on a standard fee schedule we set for all third party payers, including Medicare, health maintenance organizations ("HMO's") and managed care. The Company adjusts the contractual adjustment estimate quarterly, based on its evaluation of current and historical settlement experience with payers, industry reimbursement trends, and other relevant factors. The other relevant factors that affect our contractual adjustment include the monthly and quarterly review of: 1) current gross billings and receivables and reimbursement by payer, 2) current changes in third party arrangements and 3) the growth of in-network provider arrangements and managed care plans specific to our Company.

Our clinical laboratory business is primarily dependent upon reimbursement from third-party payers, such as Medicare (which principally serves patients 65 and older) and insurers. We are subject to variances in reimbursement rates among different third-party payers, as well as constant changes of reimbursement rates. Changes that decrease reimbursement rates or coverage would negatively impact our revenues. The number of individuals covered under managed care contracts or other similar arrangements has grown over the past several years and may continue to grow in the future. In addition, Medicare and other government healthcare programs continue to shift to managed care. These trends will continue to reduce our revenues.

During the years ended July 31, 2013, 2012 and 2011, the contractual adjustment percentages, determined using current and historical reimbursement statistics, were approximately 85%, 85% and 84%, respectively, of gross billings. The Company believes a decline in reimbursement rates or a shift to managed care, or similar arrangements may be offset by the positive impact of an increase in the number of tests we perform. However, there can be no assurance that we can increase the number of tests we perform or that if we do increase the number of tests we perform, that we can maintain that higher number of tests performed, or that an increase in the number of tests we perform would result in increased revenue.

The Company estimates (by using a sensitivity analysis) that each 1% point change in the contractual adjustment percentage could result in a change in clinical laboratory services revenues of approximately $3.8 million, $3.8 million, and $3.2 million, for the years ended July 31, 2013, 2012, and 2011, respectively, and a change in the net accounts receivable of approximately $0.5 million and $0.5 million as of July 31, 2013 and 2012, respectively.

Our clinical laboratory financial billing system records gross billings using a standard fee schedule for all payers and does not record contractual adjustment by payer at the time of billing. Therefore, we are unable to quantify the effect of contractual adjustment recorded during the current period that relate to revenue recorded in a previous period. However, we can reasonably estimate our monthly contractual adjustment to revenue on a timely basis based on our quarterly review process, which includes:

- an analysis of industry reimbursement trends;
- an evaluation of third-party reimbursement rates changes and changes in reimbursement arrangements with third-party payers;
- a rolling monthly analysis of current and historical claim settlement and reimbursement experience statistics with payers;
- an analysis of current gross billings and receivables by payer.

*Accounts Receivable and Allowance for Doubtful Accounts*

Accounts receivable are reported at realizable value, net of allowances for doubtful accounts, which is estimated and recorded in the period of the related revenue.

The following is a table of the Company's net accounts receivable by segment. The Clinical Labs segment's net receivables are detailed by billing category and as a percent to its total net receivables. As of July 31, 2013 and 2012, approximately 60% and 55%, respectively, of the Company's net accounts receivable relates to its Clinical Labs business, which operates in the New York, New Jersey and Eastern Pennsylvania medical communities. The Life Sciences segment's accounts receivable, of which $1.7 million or 35% and $2.3 million or 36% represents foreign receivables as of July 31, 2013 and 2012 respectively, includes royalty receivables of $1.2 million and $1.7 million, respectively, from Qiagen Corporation.

Net accounts receivable

| | July 31, 2013 | | July 31, 2012 | |
|---|---|---|---|---|
| | (In 000's) | (in %) | (In 000's) | (in %) |
| Clinical Labs (by billing category) | | | | |
| Medicare | $ 930 | 13 | $ 1,270 | 16 |
| Third party payers | 3,395 | 46 | 3,478 | 45 |
| Patient self-pay | 2,696 | 37 | 2,655 | 35 |
| HMO's | 300 | 4 | 330 | 4 |
| Total Clinical Labs | 7,321 | 100% | 7,733 | 100% |
| Total Life Sciences | 4,967 | | 6,402 | |
| Total accounts receivable – net | $ 12,288 | | $ 14,135 | |

Changes in the Company's allowance for doubtful accounts are as follows:

| In 000's | July 31, 2013 | July 31, 2012 |
|---|---|---|
| Beginning balance | $ 3,273 | $ 3,488 |
| Provision for doubtful accounts | 4,496 | 5,104 |
| Write-offs, net | (5,062) | (5,319) |
| Ending balance | $ 2,707 | $ 3,273 |

For the Clinical Labs segment, the allowance for doubtful accounts represents amounts that the Company does not expect to collect after the Company has exhausted its collection procedures. The Company estimates its allowance for doubtful accounts in the period the related services are billed and adjusts the estimate in future accounting periods as necessary. It bases the estimate for the allowance on the evaluation of historical collection experience, the aging profile of accounts receivable, the historical doubtful account write-off percentages, payer mix, and other relevant factors.

The allowance for doubtful accounts includes the balances, after receipt of the approved settlements from third party payers, for the insufficient diagnosis information received from the ordering physician which result in denials of payment, and the uncollectible portion of receivables from self payers, including deductibles and copayments, which are subject to credit risk and patients' ability to pay. During the years ended July 31, 2013 and 2012, the Company determined an allowance for doubtful accounts for customers whose accounts receivable have been oustanding less than 210 days and wrote off 100% of accounts receivable over 210 days, as it assumed those accounts are uncollectible, except for certain fully reserved balances, principally related to Medicare. These accounts have not been written off because the payer's filing date deadline has not occurred or the collection process has not been exhausted. The Company's collection experience on Medicare receivables beyond 210 days has been insignificant. The Company adjusts the historical collection analysis for recoveries, if any, on an ongoing basis.

The Company's ability to collect outstanding receivables from third party payers is critical to its operating performance and cash flows. The primary collection risk lies with uninsured patients or patients for whom primary insurance has paid but a patient portion remains outstanding. The Company also assesses the current state of its billing functions in order to identify any known collection or reimbursement issues in order to assess the impact, if any, on the allowance estimates, which involves judgment. The Company believes that the collectability of its receivables is directly linked to the quality of its billing processes, most notably, those related to obtaining the accurate patient information in order to bill effectively for the services provided. Should circumstances change (e.g. shift in payer mix, decline in economic conditions or deterioration in aging of receivables), our estimates of net realizable value of receivables could be reduced by a material amount.

Billing for laboratory services is complicated because of many factors, especially: the differences between our standard gross fee schedule for all payers and the reimbursement rates of the various payers we deal with, disparity of coverage and information requirements among the various payers, and disputes with payers as to which party is responsible for reimbursement.

The following table indicates the Clinical Labs aged gross receivables by payer group (in thousands), which is prior to adjustment to gross receivables for: 1) contractual adjustment, 2) fully reserved balances not yet written off, and 3) other revenue adjustments.

| As of July 31, 2013 | Total Amount | % | Medicare Amount | % | Third Party Payers Amount | % | Self-pay Amount | % | HMO's Amount | % |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-30 days | $ 25,565 | 50% | $ 3,741 | 62% | $ 14,915 | 44% | $ 3,341 | 48% | $ 3,568 | 96% |
| 31-60 days | 6,238 | 12% | 452 | 7% | 4,254 | 12% | 1,492 | 21% | 40 | 1% |
| 61-90 days | 5,923 | 12% | 357 | 6% | 3,845 | 11% | 1,686 | 24% | 35 | 1% |
| 91-120 days | 4,287 | 8% | 216 | 4% | 3,484 | 10% | 546 | 8% | 41 | 1% |
| 121-150 days | 2,319 | 5% | 166 | 3% | 2,140 | 6% | — | 0% | 13 | 0% |
| Greater than 150 days* | 6,847 | 13% | 1,058 | 18% | 5,824 | 17% | (73) | -1% | 38 | 1% |
| Totals | $ 51,179 | 100% | $ 5,990 | 100% | $ 34,462 | 100% | $ 6,992 | 100% | $ 3,735 | 100% |

| As of July 31, 2012 | Total Amount | % | Medicare Amount | % | Third Party Payers Amount | % | Self-pay Amount | % | HMO's Amount | % |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-30 days | $ 27,092 | 54% | $ 5,246 | 56% | $ 14,529 | 52% | $ 3,337 | 39% | $ 3,980 | 89% |
| 31-60 days | 8,282 | 17% | 475 | 5% | 4,566 | 17% | 3,092 | 36% | 149 | 3% |
| 61-90 days | 4,922 | 9% | 964 | 10% | 2,561 | 9% | 1,257 | 15% | 140 | 3% |
| 91-120 days | 3,758 | 8% | 512 | 6% | 2,124 | 8% | 977 | 10% | 145 | 3% |
| 121-150 days | 2,301 | 5% | 515 | 6% | 1,733 | 6% | — | 0% | 53 | 1% |
| Greater than 150 days** | 3,701 | 7% | 1,589 | 17% | 2,072 | 8% | — | 0% | 40 | 1% |
| Totals | $ 50,056 | 100% | $ 9,301 | 100% | $ 27,585 | 100% | $ 8,663 | 100% | $ 4,507 | 100% |

* Total includes $3,775 fully reserved over 210 days as of July 31, 2013.

** Total includes $1,178 fully reserved over 210 days as of July 31, 2012.

*Income Taxes*

The Company accounts for income taxes under the liability method of accounting for income taxes. Under the liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The liability method requires that any tax benefits recognized for net operating loss carry forwards and other items be reduced by a valuation allowance where it is not more likely than not the benefits will be realized in the foreseeable future.

Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under the liability method, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

It is the Company's policy to provide for uncertain tax positions, if any, and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. To the extent the Company prevails in matters for which a liability for an unrecognized tax benefit is established or is required to pay amounts in excess of the liability, the Company's effective tax rate in a given financial statement period may be affected.

*Inventory*

The Company values inventory at the lower of cost (first-in, first-out) or market. Work-in-process and finished goods inventories consist of material, labor, and manufacturing overhead. Write downs of inventories to market value are based on a review of inventory quantities on hand and estimated sales forecasts based on sales history and anticipated future demand. Unanticipated changes in demand could have a significant impact on the value of our inventory and require additional write downs of inventory which would impact our results of operations.

*Goodwill and Indefinite-Lived Intangibles*

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. The Company tests goodwill and had tested other indefinite lived intangibles for impairment annually as of the first day of the fourth quarter, or more frequently if indicators of potential impairment exist. Goodwill is reviewed for impairment utilizing a two-step process. The first step of the impairment test requires the identification of the reporting units and comparison of the fair value of each of these reporting units to their respective carrying value. If the carrying value of the reporting unit is less than its fair value, no impairment exists and the second step is not performed. If the carrying value of the reporting unit is higher than its fair value, the second step must be performed to compute the amount of the goodwill impairment, if any. In the second step, the impairment is computed by comparing the implied fair value of the reporting unit goodwill with the carrying amount of that goodwill. If the carrying amount of the reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized for the excess. In the fiscal 2012 fourth quarter the Company recorded a non-cash goodwill impairment charge relating to the Life Sciences reporting unit of $18.8 million after completing an interim impairment assessment as of July 31, 2012. The interim impairment test as of July 31, 2012 was required due to a decline in market capitalization of 44% from May 1 to July 31, 2012 and declining revenues experienced in the fourth quarter of fiscal 2012.

In connection with the annual assessment of indefinite-lived intangibles as of May 1, 2012, the Company determined the estimated fair value of trademarks, relating to the Enzo Life Sciences reporting unit, were less than their carrying values by $5.7 million primarily due to declines in projected revenues and in connection with future plans resulting from a strategic review. As a result of this impairment, which included a change in the future branding strategy, the useful life of the trademarks were reassessed and determined to have an estimated economic life of 5 years. A non-cash impairment charge of $5.7 million, ($4.4 million net of related taxes) was recorded for the trademark impairment in the fourth quarter. As a result of the reclassification of trademarks from indefinite lived to a 5 year life, annual amortization of trademarks is estimated to be $0.6 million per year.

*Intangible Assets*

Intangible assets (exclusive of patents), arose primarily from acquisitions and primarily consist of customer relationships, trademarks, licenses, employment and non-compete agreements, and website and database content. These finite-lived intangible assets are amortized according to their estimated useful lives, which range from 4 to 15 years. The Company had previously capitalized certain legal costs directly incurred in pursuing patent applications as patent costs. When such applications result in an issued patent, the related costs are amortized over a ten year period or the life of the patent, whichever is shorter, using the straight-line method. The Company reviews its issued patents and pending patent applications, and if it determines to abandon a patent application or that an issued patent no longer has economic value, the unamortized balance in deferred patent costs relating to that patent is immediately expensed.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk from changes in foreign currency exchange rates resulting from acquisitions with foreign locations (See Item 1A. Risk Factors and Note 2 in the Notes to Consolidated Financial Statements) that could impact our results of operations and financial position. We do not currently engage in any hedging or market risk management tools.

*Foreign Currency Exchange Rate Risk*

The financial reporting of our non-U.S. subsidiaries is denominated in currencies other than the U.S. dollar. Since the functional currency of our non-U.S. subsidiaries is the local currency, foreign currency translation adjustments are accumulated as a component of accumulated other comprehensive income in stockholders' equity. Assuming a hypothetical decline of 10% in the exchange rates of foreign currencies against the U.S. dollar at July 31, 2013, our assets and liabilities would decrease by $1.0 million and $0.6 million, respectively, and our net sales and net earnings (loss) would decrease by $1.3 million and $0.2 million, respectively, on an annual basis.

We also maintain intercompany balances and loans receivable with subsidiaries with different local currencies. These amounts are at risk of foreign exchange losses if exchange rates fluctuate. Assuming a hypothetical increase of 10% in the exchange rates of foreign currencies against the U.S. dollar at July 31, 2013, our pre-tax earnings (loss) would be unfavorably impacted by approximately $0.4 million on an annual basis.

*Interest Rate Risk*

We are exposed to interest rate risk with our variable rate Credit Agreement which bears interest at the three month LIBOR with a floor of 1.25% plus 4% per annum. A 3% change in the LIBOR rate would impact our interest expense by $0.1 million.

As of July 31, 2013, we have fixed interest rate financing on transportation and equipment leases.

Item 8. Financial Statements and Supplementary Data

The response to this item is submitted in a separate section of this report. See Item 15(a) (1) and (2)

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**

As required by Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of July 31, 2013. This evaluation was carried out under the supervision and with participation of our Chief Executive Officer and Chief Financial Officer. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures. Therefore, effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives.

Based upon our evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective at that reasonable assurance level as of July 31, 2013, and that information required to be disclosed in the reports that we file under the Exchange Act is recorded, processed, summarized and reported in a timely manner and is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

**Changes in Internal Control over Financial Reporting**

There was no change in our internal control over financial reporting during the fourth quarter ended July 31, 2013 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**Management's Annual Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) under the Exchange Act.

Our 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 and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of management and our directors; and
- provide reasonable assurance regarding prevention and timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems that are determined to be effective provide only reasonable assurance with respect to financial statement preparation and presentation. 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.

Management assessed the effectiveness of our internal control over financial reporting based on criteria for effective internal control over financial reporting described in the 1992 Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on its assessment, management concluded that we maintained effective internal control over financial reporting as of July 31, 2013.

EisnerAmper LLP, our independent registered public accounting firm, has audited the effectiveness of the Company's internal control over financial reporting as of July 31, 2013, as stated in their report, which is included herein.

## Report of Independent Registered Public Accounting Firm

**The Board of Directors and Stockholders**

**Enzo Biochem, Inc.**

We have audited Enzo Biochem, Inc. and subsidiaries' (the "Company") internal control over financial reporting as of July 31, 2013, based on criteria established in the 1992 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). 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's Annual 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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 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.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

In our opinion, Enzo Biochem, Inc. and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of July 31, 2013, based on criteria established in the 1992 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), the consolidated balance sheet of Enzo Biochem, Inc. and subsidiaries as of July 31, 2013, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for the year then ended, and our report dated October 15, 2013 expressed an unqualified opinion thereon.

/s/ EisnerAmper LLP

New York, New York
October 15, 2013

Item 9B. Other Information

None

**PART III**

Item 10. Directors, Executive Officers and Corporate Governance

The information required under this item will be set forth in the Company's proxy statement to be filed with the Securities and Exchange Commission on or before November 27, 2013 and is incorporated herein by reference.

Item 11. Executive Compensation

The information required under this item will be set forth in the Company's proxy statement to be filed with the Securities and Exchange Commission on or before November 27, 2013 and is incorporated herein by reference.

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

The information required under this item will be set forth in the Company's proxy statement to be filed with the Securities and Exchange Commission on or before November 27, 2013 and is incorporated herein by reference.

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

The information required under this item will be set forth in the Company's proxy statement to be filed with the Securities and Exchange Commission on or before November 27, 2013 and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information required under this item will be set forth in the Company's proxy statement expected to be filed with the Securities and Exchange Commission on or before November 27, 2013 and is incorporated herein by reference.

**PART IV**

Item 15. Exhibits, Financial Statement Schedules

(a) (1) Consolidated Financial Statements
Consolidated Balance Sheets - July 31, 2013 and 2012
Consolidated Statements of Operations - Years ended July 31, 2013, 2012 and 2011
Consolidated Statements of Comprehensive Income (Loss) - Years ended July 31, 2013, 2012 and 2011
Consolidated Statements of Stockholders' Equity - Years ended July 31, 2013, 2012 and 2011
Consolidated Statements of Cash Flows - Years ended July 31, 2013, 2012 and 2011
Notes to Consolidated Financial Statements

(2) Financial Statement Schedule

Schedule II - Valuation and Qualifying Accounts

All other schedules have been omitted because the required information is included in the consolidated financial statements or the notes thereto or because they are not required.

(3) Exhibits

The following documents are filed as Exhibits to this Annual Report on Form 10-K:

| Exhibit No. | Description |
|---|---|
| 3(a) | Certificate of Incorporation (1) |
| 3(b) | Certificate of Incorporation, as amended on March 17, 1980. (1) |
| 3(c) | Certificate of Amendment of the Certificate of Incorporation as amended on June 16, 1981. (2) |
| 3(d) | Certificate of Amendment to the Certificate of Incorporation as of July 22, 1988. (3) |
| 3(e) | Amended and restated Bylaws. (4) |
| 10(a) | 1994 Stock Option Plan. (5) |
| 10 (b) | 1999 Stock Option Plan. (6) |
| 10 (c) | 2005 Equity Compensation Incentive Plan (7) |
| 10 (d) | 2011 Incentive Plan (8) |
| 10 (e) | Lease agreement with Pari Management (9) |
| 10 (f) | Settlement and Release Agreement between the Company and Sigma Aldrich (10) |
| 10 (g) | Stock Purchase Agreement By and Among Enzo Life Sciences, Inc., Axxora Life Sciences Inc., and the Stock holders, Option holders and Warrant holders (12) |
| 10 (h) | Stock Asset Purchase Agreement By and Among Buyer Parties and Seller Parties with respect to the Biomol International and affiliate acquisition (13) |
| 10 (i) | Asset Purchase Agreement By and Among Enzo Life Sciences, Acquisition, Inc. and Assay Designs, Inc.(14) |
| 10 (j) | Amended and Restated Employment Agreement with Elazar Rabbani (15) |
| 10 (k) | Amended and Restated Employment Agreement with Barry Weiner (15) |
| 10 (l) | Controlled Equity Offering Sales Agreement with Cantor Fitzgerald & Co,, as sales agent (16) |
| 10 (m)* | Revolving Loan and Security Agreement among the Enzo Biochem, Inc., Enzo Clinical Labs, Inc., Enzo Life Sciences, Inc., Axxora, LLC and Enzo Realty, LLC as borrowers, and Enzo Therapeutics, Inc. as a guarantor, and Healthcare Finance Group, LLC as Lender(17) |
| 14 (a) | Code of Ethics (11) |
| 21* | List of subsidiaries of the Company |
| 23.1* | Consent of Independent Registered Public Accounting Firm |
| 23.2* | Consent of Independent Registered Public Accounting Firm |
| 31 (a)* | Certification of CEO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 |
| 31 (b)* | Certification of CFO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 |
| 32 (a)* | Certification of CEO Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 32 (b)* | Certification of CFO Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |

| | |
|---|---|
| 101. INS** | XBRL Instance Document |
| 101. SCH** | XBRL Taxonomy Extension Schema Document |
| 101. CAL** | XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.DEF** | XBRL Taxonomy Extension Definitions Linkbase Document |
| 101.LAB** | XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRE** | XBRL Taxonomy Extension Presentation Linkbase Document |

* Filed herewith

** XBRL (Extensible Business Reporting Language) information is being furnished and not filed for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934.

(1) The exhibits were filed as exhibits to the Company's Registration Statement on Form S-18 (File No. 2-67359) and are incorporated herein by reference.

(2) This exhibit was filed as an exhibit to the Company's Form 10-K for the year ended July 31, 1981 and is incorporated herein by reference.

(3) This exhibit was filed with the Company's Annual Report on Form 10-K for the year ended July 31, 1989 and is incorporated herein by reference.

(4) This exhibit was filed with the Company's Current Report on Form 8-K May 8, 2008 and is incorporated herein by reference.

(5) This exhibit was filed with the Company's Annual Report on Form 10-K for the year ended July 31, 1995 and is incorporated herein by reference.

(6) This exhibit was filed with the Company's Registration Statement on Form S-8 (333-87153) and is incorporated herein by reference.

(7) This exhibit was filed as an exhibit to the Company's Proxy Statement of Schedule 14A filed on January 19, 2006 and is incorporated herein by reference.

(8) This exhibit was filed as appendix B to the Company's Definitive Proxy Statement on Schedule 14A, which was filed with the Securities and Exchange Commission on November 16, 2010 and is incorporated herein by reference.

(9) This exhibit was filed with the Company's Annual Report on Form 10-K for the year ended July 31, 2006 and is incorporated herein by reference.

(10) This exhibit was filed with the Company's Current Report on Form 8-K on September 21, 2006 and is incorporated herein by reference.

(11) This exhibit was filed with the Company's Annual Report on Form 10-K for the year ended July 31, 2003 and is incorporated here by reference.

(12) This exhibit was filed with the Company's Current Report on Form 8-K May 30, 2007 and is incorporated herein by reference.

(13) This exhibit was filed with the Company's Current Report on Form 8-K May 8, 2008 and is incorporated herein by reference.

(14) This exhibit was filed with the Company's Current Report on Form 8-K March 13, 2009 and is incorporated herein by reference.

(15) This exhibit was filed with the Company's Current Annual Report on Form 10-K for the year ended July 31, 2010 and is incorporated herein by reference.

(16) This exhibit was filed with the Company's Current Report on Form 8-K on March 28, 2013 and incorporated herein by reference.

(17) This exhibit is being filed with the Company's Current Report on Form 10-K for the year ended July 31, 2013.

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.

ENZO BIOCHEM, INC.

Date: October 15, 2013

By: /s/ Elazar Rabbani Ph.D.
Chairman of the Board

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.

By: /s/ Elazar Rabbani Ph.D. October 15, 2013
Elazar Rabbani,
Chairman of Board of Directors and Secretary
(Principal Executive Officer)

By: /s/ Barry W. Weiner October 15, 2013
Barry W. Weiner,
President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director

By: /s/ Bernard L. Kasten MD October 15, 2013
Bernard Kasten, Director

By: /s/ Gregory M. Bortz October 15, 2013
Gregory M. Bortz, Director

By: /s/ Dov Perlysky October 15, 2013
Dov Perlysky, Director

FORM 10-K, ITEM 15(a) (1) and (2)
ENZO BIOCHEM, INC.

LIST OF CONSOLIDATED FINANCIAL STATEMENTS AND
FINANCIAL STATEMENT SCHEDULE

The following consolidated financial statements and financial statement schedule of Enzo Biochem, Inc. are included in Item 15(a):



All other schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore have been omitted.

## Report of Independent Registered Public Accounting Firm

**The Board of Directors and Stockholders**

**Enzo Biochem, Inc.**

We have audited the accompanying consolidated balance sheet of Enzo Biochem, Inc. and subsidiaries (the "Company") as of July 31, 2013, and the related consolidated statement of operations, comprehensive income (loss), stockholders' equity, and cash flows for the year then ended. The financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Enzo Biochem, Inc. and subsidiaries as of July 31, 2013, and the consolidated results of their operations and their cash flows for the year then ended 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), Enzo Biochem, Inc. and subsidiaries' internal control over financial reporting as of July 31, 2013, based on criteria established in the 1992 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and our report dated October 15, 2013 expressed an unqualified opinion thereon.

In connection with our audit of the consolidated financial statements referred to above, we also audited Schedule II — Valuation and Qualifying Accounts for the year ended July 31, 2013. In our opinion, this financial schedule, when considered in relation to the consolidated financial statements taken as a whole, presents fairly, in all material respects, the information stated therein.

/s/ EisnerAmper LLP

New York, New York
October 15, 2013

## Report of Independent Registered Public Accounting Firm

**The Board of Directors and Stockholders of Enzo Biochem, Inc.**

We have audited the accompanying consolidated balance sheet of Enzo Biochem, Inc. (the "Company") as of July 31, 2012, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for the years ended July 31, 2012 and 2011. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Enzo Biochem, Inc. at July 31, 2012, and the consolidated results of their operations and their cash flows for each of the years ended July 31, 2012 and 2011, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

/s/ Ernst & Young LLP

Jericho, New York
October 15, 2012

**ENZO BIOCHEM, INC.**
**CONSOLIDATED BALANCE SHEETS**
**(in thousands, except share and per share data)**

| | July 31, 2013 | July 31, 2012 |
|---|---|---|
| ASSETS | | |
| Current assets: | | |
| Cash and cash equivalents | $ 9,007 | $ 15,076 |
| Accounts receivable, net of allowance for doubtful accounts of $2,707 in 2013 and $3,273 in 2012 | 12,288 | 14,135 |
| Inventories | 8,805 | 8,800 |
| Prepaid expenses | 2,456 | 2,357 |
| Total current assets | 32,556 | 40,368 |
| Property, plant, and equipment, net | 8,617 | 9,116 |
| Goodwill | 7,452 | 7,452 |
| Intangible assets, net | 9,943 | 11,780 |
| Other | 390 | 407 |
| Total assets | $ 58,958 | $ 69,123 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Loan payable | $ 3,264 | $ — |
| Accounts payable – trade | 8,481 | 9,020 |
| Accrued liabilities | 11,776 | 9,818 |
| Other current liabilities | 331 | 118 |
| Total current liabilities | 23,852 | 18,956 |
| Deferred taxes | 200 | 938 |
| Other liabilities | 774 | 128 |
| Total liabilities | $ 24,826 | $ 20,022 |
| Commitments and contingencies | | |
| Stockholders' equity: | | |
| Preferred Stock, $.01 par value; authorized 25,000,000 shares; no shares issued or outstanding | — | — |
| Common Stock, $.01 par value; authorized 75,000,000 shares; shares issued: 40,569,393 at July 31, 2013 and 39,495,475 at July 31, 2012 | 406 | 395 |
| Additional paid-in capital | 304,288 | 304,358 |
| Less treasury stock at cost: none at July 31, 2013 and 216,556 shares at July 31, 2012 | — | (3,074) |
| Accumulated deficit | (272,420) | (254,183) |
| Accumulated other comprehensive income | 1,858 | 1,605 |
| Total stockholders' equity | 34,132 | 49,101 |
| Total liabilities and stockholders' equity | $ 58,958 | $ 69,123 |

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

**ENZO BIOCHEM, INC.**
**CONSOLIDATED STATEMENTS OF OPERATIONS**
**(in thousands, except per share data)**

| | Years ended July 31, | | |
|---|---|---|---|
| | **2013** | **2012** | **2011** |
| Revenues: | | | |
| Clinical laboratory services | $ 55,889 | $ 59,403 | $ 52,762 |
| Product revenues | 32,526 | 37,722 | 41,830 |
| Royalty and license fee income | 5,292 | 5,958 | 7,437 |
| Total revenues | 93,707 | 103,083 | 102,029 |
| | | | |
| Operating expenses: | | | |
| Cost of clinical laboratory services | 38,251 | 36,305 | 31,682 |
| Cost of product revenues | 16,584 | 19,668 | 22,137 |
| Research and development | 3,889 | 6,293 | 7,806 |
| Selling, general, and administrative | 43,654 | 47,928 | 45,191 |
| Provision for uncollectible accounts receivable | 4,496 | 5,104 | 4,431 |
| Legal | 5,813 | 3,724 | 3,710 |
| Impairment charges | — | 24,540 | — |
| Total operating expenses | 112,687 | 143,562 | 114,957 |
| | | | |
| Operating loss | (18,980) | (40,479) | (12,928) |
| | | | |
| Other income (expense): | | | |
| Interest | (54) | 21 | 11 |
| Other | 5 | 77 | 45 |
| Foreign exchange gain (loss) | 80 | (540) | 49 |
| | | | |
| Loss before income taxes | (18,949) | (40,921) | (12,823) |
| Benefit (provision) for income taxes | 712 | 1,652 | (137) |
| | | | |
| Net loss | $ (18,237) | $ (39,269) | $ (12,960) |
| | | | |
| Net loss per common share: | | | |
| Basic and diluted | $ (0.46) | $ (1.01) | $ (0.34) |
| | | | |
| Weighted average common shares outstanding: | | | |
| Basic and diluted | 39,607 | 38,798 | 38,357 |

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

**ENZO BIOCHEM, INC.**
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**
**(in thousands)**

| | Years Ended July 31, | | |
|---|---|---|---|
| | **2013** | **2012** | **2011** |
| Net loss | $ (18,237) | $ (39,269) | $ (12,960) |
| Other comprehensive income (loss): | | | |
| Foreign currency translation adjustments | 253 | (2,188) | 2,918 |
| Comprehensive loss | $ (17,984) | $ (41,457) | $ (10,042) |

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

**ENZO BIOCHEM, INC.**
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**
**Years ended July 31, 2013, 2012, and 2011**
**(In thousands, except share data)**

| | *Common Stock Shares* | *Treasury Stock Shares* | Common Stock Amount | Additional Paid-in Capital | Treasury Stock Amount | Accumulated Deficit | Accumulated Other Comprehensive Income | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| Balance at July 31, 2010 | *38,782,725* | *623,848* | 388 | 306,561 | (8,854) | (201,954) | 875 | 97,016 |
| Net (loss) for the year ended July 31, 2011 | — | — | — | — | — | (12,960) | — | (12,960) |
| Vesting of restricted stock | *263,112* | — | 2 | — | — | — | — | 2 |
| Share based compensation charges | — | — | — | 1,049 | — | — | — | 1,049 |
| Issuance of treasury stock for employee 401(k) plan match | — | *(173,834)* | — | (1,777) | 2,467 | — | — | 690 |
| Foreign currency translation adjustments | — | — | — | — | — | — | 2,918 | 2,918 |
| Balance at July 31, 2011 | 39,045,837 | 450,014 | 390 | 305,833 | (6,387) | (214,914) | 3,793 | 88,715 |
| Net (loss) for the year ended July 31, 2012 | — | — | — | — | — | (39,269) | — | (39,269) |
| Vesting of restricted stock | 174,638 | — | 2 | — | — | — | — | 2 |
| Share based compensation charges | — | — | — | 719 | — | — | — | 719 |
| Issuance of treasury stock for employee 401(k) plan match | — | *(233,458)* | — | (2,664) | 3,313 | — | — | 649 |
| Issuance of common stock for services | 275,000 | — | 3 | 470 | — | — | — | 473 |
| Foreign currency translation adjustments | — | — | — | — | — | — | (2,188) | (2,188) |
| Balance at July 31, 2012 | *39,495,475* | *216,556* | $ 395 | $ 304,358 | $ (3,074) | $ (254,183) | $ 1,605 | $ 49,101 |
| Net (loss) for the year ended July 31, 2013 | — | — | — | — | — | (18,237) | — | (18,237) |
| Vesting of restricted stock | 157,784 | — | 2 | — | — | — | — | 2 |
| Share based compensation charges | — | — | — | 545 | — | — | — | 545 |
| Net proceeds from Issuance of common stock (net of expenses of $224) | 906,715 | — | 9 | 1,816 | — | — | — | 1,825 |
| Issuance of treasury stock for employee 401(k) plan match | — | (216,556) | — | (2,458) | 3,074 | — | — | 616 |
| Issuance of common stock for employee 401(k) plan match | 9,419 | — | — | 27 | — | — | — | 27 |
| Foreign currency translation adjustments | — | — | — | — | — | — | 253 | 253 |
| Balance at July 31, 2013 | *40,569,393* | — | $ 406 | $ 304,288 | $ — | $ (272,420) | $ 1,858 | $ 34,132 |

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

**ENZO BIOCHEM, INC.**
**CONSOLIDATED STATEMENTS OF CASH FLOWS**
**(in thousands)**

| | Years ended July 31, | | |
|---|---|---|---|
| | **2013** | **2012** | **2011** |
| Cash flows from operating activities: | | | |
| Net loss | $ (18,237) | $ (39,269) | $ (12,960) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | |
| Depreciation and amortization of property, plant and equipment | 2,615 | 2,817 | 2,962 |
| Amortization of intangible assets | 1,990 | 1,660 | 1,507 |
| Provision for uncollectible accounts receivable | 4,496 | 5,104 | 4,431 |
| Deferred income tax (benefit) provision | (759) | (1,762) | 17 |
| Share based compensation charges | 545 | 719 | 1,049 |
| Share based 401(k) employer match expense | 643 | 649 | 690 |
| Deferred revenue recognized | — | (400) | (38) |
| Foreign exchange (gain) loss | (127) | 538 | (131) |
| Impairment charges | — | 24,540 | — |
| Changes in operating assets and liabilities: | | | |
| Accounts receivable | (2,606) | (4,210) | (6,537) |
| Inventories | 60 | 199 | (178) |
| Prepaid expenses | (97) | 356 | (432) |
| Accounts payable – trade | (514) | 1,031 | 1,462 |
| Accrued liabilities, other current liabilities and other liabilities | 1,975 | 2,056 | (168) |
| Total adjustments | 8,221 | 33,297 | 4,634 |
| Net cash used in operating activities | (10,016) | (5,972) | (8,326) |
| Cash flows from investing activities: | | | |
| Capital expenditures | (988) | (1,364) | (1,223) |
| Maturities of short term investments | — | 58,497 | 182,453 |
| Purchases of short term investments | — | (48,497) | (167,646) |
| Decrease (Increase) in security deposits and other | 17 | (25) | (45) |
| Earn-out payment | — | (1,150) | — |
| Net cash (used in) provided by investing activities | (971) | 7,461 | 13,539 |
| Cash flows from financing activities: | | | |
| Net proceeds from issuance of common stock | 1,825 | — | — |
| Proceeds from borrowings under Credit Agreement | 13,360 | — | — |
| Repayments under Credit Agreement | (10,096) | — | — |
| Installment loan payments | (274) | (154) | (68) |
| Net cash provided (used in) financing activities | 4,815 | (154) | (68) |
| Effect of exchange rate changes on cash and cash equivalents | 103 | (420) | 257 |
| (Decrease) increase in cash and cash equivalents | (6,069) | 915 | 5,402 |
| Cash and cash equivalents - beginning of year | 15,076 | 14,161 | 8,759 |
| Cash and cash equivalents - end of year | $ 9,007 | $ 15,076 | $ 14,161 |

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

**Note 1 - Summary of significant accounting policies**

Nature of business

Enzo Biochem, Inc. (the "Company") is an integrated life science and biotechnology company engaged in research, development, manufacturing and marketing of diagnostic and research products based on genetic engineering, biotechnology and molecular biology. These products are designed for the diagnosis of and/or screening for infectious diseases, cancers, genetic defects and other medically pertinent diagnostic information and are distributed in the United States and internationally. The Company is conducting research and development activities in the development of therapeutic products based on the Company's technology platform of genetic modulation and immune modulation. The Company also operates a clinical laboratory that offers and provides diagnostic medical testing services in the New York, New Jersey and Eastern Pennsylvania medical communities. The Company operates in three segments (see Note 15).

*Principles of consolidation*

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") and include the accounts of the Company and its wholly-owned subsidiaries, Enzo Clinical Labs, Inc., Enzo Life Sciences, Inc. (and its wholly-owned foreign subsidiaries), Enzo Therapeutics, Inc. and Enzo Realty LLC ("Realty"). All intercompany transactions and balances have been eliminated. The results of operations for companies acquired are included in the consolidated financial statements from the effective date of the acquisition.

*Use of Estimates*

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying footnotes. Actual results could differ from those estimates.

*Foreign Currency Translation/Transactions*

The Company has determined that the functional currency for its foreign subsidiaries is the local currency. For financial reporting purposes, assets and liabilities denominated in foreign currencies are translated at current exchange rates and profit and loss accounts are translated at weighted average exchange rates. Resulting translation gains and losses are included as a separate component of stockholders' equity as accumulated other comprehensive income or loss. Gains or losses resulting from transactions entered into in other than the functional currency are recorded as foreign exchange gains and losses in the consolidated statements of operations.

*Cash and cash equivalents*

Cash and cash equivalents consist of demand deposits with banks, highly liquid money market funds, and highly liquid U.S. Government instruments acquired with maturities of less than ninety days. At July 31, 2013 and 2012, the Company had cash and cash equivalents in foreign bank accounts of $1.5 million and $2.5 million, respectively.

*Fair Values of Financial Instruments*

The recorded amounts of the Company's cash and equivalents, receivables, loan payable, accounts payable and accrued liabilities approximate their fair values principally because of the short-term nature of these items.

*Concentration of credit risk*

Financial instruments that potentially subject the Company to concentrations of credit risk primarily consist of cash and cash equivalents and accounts receivable.

The Company believes the fair value of the aforementioned financial instruments approximates the cost due to the immediate or short-term nature of these items.

Concentration of credit risk with respect to the Company's Life Sciences segment is mitigated by the diversity of the Company's clients and their dispersion across many different geographic regions. To reduce risk, the Company routinely assesses the financial strength of these customers and, consequently, believes that its accounts receivable credit exposure with respect to these customers is limited.

The Company believes that the concentration of credit risk with respect to the Clinical Labs accounts receivable is mitigated by the diversity of its third party payers that insure individuals. To reduce risk, the Company routinely assesses the financial strength of these payers and, consequently, believes that its accounts receivable credit risk exposure, with respect to these payers, is limited. While the Company also has receivables due from the Federal Medicare program, the Company does not believe that these receivables represent a credit risk since the Medicare program is funded by the federal government and payment is primarily dependent on our submitting the appropriate documentation.

*Accrual for Self-Funded Medical*

Accruals for self-funded medical insurance are determined based on a number of assumptions and factors, including historical payment trends, claims history and current estimates. These estimated liabilities are not discounted. If actual trends differ from these estimates, the financial results could be impacted.

*Revenue Recognition - Product revenues*

Revenues from product sales are recognized when the products are shipped and title transfers, the sales price is fixed or determinable and collectability is reasonably assured.

*Royalties*

Royalty revenues are recorded in the period earned. Royalties received in advance of being earned are recorded as deferred revenues in the accompanying balance sheet.

**(Dollars in thousands except share data)**

*Clinical laboratory services*

Revenues from the Clinical Labs segment are recognized upon completion of the testing process for a specific patient and reported to the ordering physician. These revenues and the associated accounts receivable are based on gross amounts billed or billable for services rendered, net of a contractual adjustment, which is the difference between amounts billed to payers and the expected reimbursable settlements from such payers.

The following table summarizes the Clinical Lab segment's net revenues and revenue percentages by revenue category:

| | Years ended July 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2013 | | 2012 | | 2011 | |
| **Revenue category** | | **(in %)** | | **(in %)** | | **(in %)** |
| Medicare | $ 12,497 | 22 | $ 12,658 | 21 | $ 11,856 | 22 |
| Third-party payers | 26,014 | 47 | 29,616 | 50 | 24,335 | 46 |
| Patient self-pay | 12,172 | 22 | 11,895 | 20 | 11,554 | 22 |
| HMO's | 5,206 | 9 | 5,234 | 9 | 5,017 | 10 |
| Total | $ 55,889 | 100% | $ 59,403 | 100% | $ 52,762 | 100% |

The Company provides services to certain patients covered by various third-party payers, including the Federal Medicare program. Laws and regulations governing Medicare are complex and subject to interpretation for which action for noncompliance includes fines, penalties and exclusion from the Medicare programs (See Note 14).

Other than the Medicare program, one provider whose programs are included in the "Third-party payers" and "Health Maintenance Organizations" ("HMO's") categories represent approximately 22%, 21% and 22% of the Clinical Labs segment net revenue for the years ended July 31, 2013, 2012 and 2011 respectively. Another third party provider represents 9%,13% and 11% of the Clinical Labs segment's net revenue for the years ended July 31, 2013, 2012 and 2011, respectively.

*Contractual Adjustment*

The Company's estimate of contractual adjustment is based on significant assumptions and judgments, such as its interpretation of payer reimbursement policies, and bears the risk of change. The estimation process is based on the experience of amounts approved as reimbursable and ultimately settled by payers, versus the corresponding gross amount billed to the respective payers. The contractual adjustment is an estimate that reduces gross revenue based on gross billing rates, to amounts expected to be approved and reimbursed. Gross billings are based on a standard fee schedule the Company sets for all third-party payers, including Medicare, HMO's and managed care providers. The Company adjusts the contractual adjustment estimate quarterly, based on its evaluation of current and historical settlement experience with payers, industry reimbursement trends, and other relevant factors which include the monthly and quarterly review of: 1) current gross billings and receivables and reimbursement by payer, 2) current changes in third party arrangements and 3) the growth of in-network provider arrangements and managed care plans specific to our Company.

During the years ended July 31, 2013, 2012 and 2011, the contractual adjustment percentages, determined using current and historical reimbursement statistics, were approximately 85%, 85% and 84%, respectively, of gross billings.

**(Dollars in thousands except share data)**

*Accounts Receivable and Allowance for Doubtful Accounts*

Accounts receivable are reported at realizable value, net of allowances for doubtful accounts, which is estimated and recorded in the period of the related revenue.

For the Clinical Labs segment, the allowance for doubtful accounts represents amounts that the Company does not expect to collect after the Company has exhausted its collection procedures. The Company estimates its allowance for doubtful accounts in the period the related services are billed and adjusts the estimate in future accounting periods as necessary. It bases the estimate for the allowance on the evaluation of historical collection experience, the aging profile of accounts receivable, payer mix and other relevant factors.

During the years ended July 31, 2013 and 2012, the Company determined an allowance for doubtful accounts for customers whose accounts receivable have been outstanding less than 210 days and either fully reserved or wrote off 100% of accounts receivable over 210 days, as it determined based on historical trends that those accounts were uncollectible, except for certain fully reserved balances, principally related to Medicare. These accounts have not been written off because the payer's filing date deadline has not occurred or the collection process has not been exhausted. The Company adjusts the historical collection analysis for recoveries, if any, on an ongoing basis.

The Company's ability to collect outstanding receivables from third-party payers is critical to its operating performance and cash flows. The primary collection risk lies with uninsured patients or patients for whom primary insurance has paid but a patient portion remains outstanding. The Company also assesses the current state of its billing functions in order to identify any known collection issues and to assess the impact, if any, on the allowance estimates which involves judgment. The Company believes that the collectability of its receivables is directly linked to the quality of its billing processes, most notably, those related to obtaining the correct information in order to bill effectively for the services provided. Should circumstances change (e.g. shift in payer mix, decline in economic conditions or deterioration in aging of receivables), our estimates of net realizable value of receivables could be reduced by a material amount.

The Clinical Labs segment's net receivables are detailed by billing category and as a percent to its total net receivables. At July 31, 2013 and 2012, approximately 60% and 55%, respectively, of the Company's net accounts receivable relates to its Clinical Labs business, which operates in the New York, New Jersey, and Eastern Pennsylvania medical communities.

The Life Sciences segment's accounts receivable includes royalties receivable of $1.2 million and $1.7 million, as of July 31, 2013 and 2012, respectively, due from QIAGEN Gaithersburg Inc. ("Qiagen") (see Note 12).

The following is a table of the Company's net accounts receivable by segment.

| | July 31, 2013 | | July 31, 2012 | |
|---|---|---|---|---|
| **Net accounts receivable by segment** | | **(in %)** | | **(in %)** |
| Clinical Labs (by billing category) | | | | |
| Medicare | $ 930 | 13 | $ 1,270 | 16 |
| Third party payers | 3,395 | 46 | 3,478 | 45 |
| Patient self-pay | 2,696 | 37 | 2,655 | 35 |
| HMO's | 300 | 4 | 330 | 4 |
| Total Clinical Labs | 7,321 | 100% | 7,733 | 100% |
| | | | | |
| Total Life Sciences | 4,967 | | 6,402 | |
| Total accounts receivable – net | $ 12,288 | | $ 14,135 | |

(Dollars in thousands except share data)

Changes in the Company's allowance for doubtful accounts are as follows:

| | July 31, 2013 | July 31, 2012 |
|---|---|---|
| Beginning balance | $ 3,273 | $ 3,488 |
| Provision for doubtful accounts | 4,496 | 5,104 |
| Write-offs | (5,062) | (5,319) |
| Ending balance | $ 2,707 | $ 3,273 |

*Inventories*

The Company values inventory at the lower of cost (first-in, first-out) or market. Work-in-process and finished goods inventories consist of material, labor, and manufacturing overhead. Write downs of inventories to market value are based on a review of inventory quantities on hand and estimated sales forecasts based on sales history and anticipated future demand. Unanticipated changes in demand could have a significant impact on the value of our inventory and require additional write downs of inventory which would impact our results of operations.

*Property, plant and equipment*

Property, plant and equipment is stated at cost, and depreciated on the straight-line basis over the estimated useful lives of the various asset classes as follows: building and building improvements: 15-30 years, and laboratory machinery and equipment and office furniture and computer equipment which range from 3-10 years. Leasehold improvements are amortized over the term of the related leases or estimated useful lives of the assets, whichever is shorter.

*Impairment of Long-Lived Assets*

The Company reviews the recoverability of the carrying value of long-lived assets (including intangible assets with finite lives) for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. Should indicators of impairment exist, the carrying values of the assets are evaluated in relation to the operating performance and future undiscounted cash flows of the underlying business. The net book value of an asset is adjusted to fair value if its expected future undiscounted cash flow is less than its book value. The Company reviewed long-lived assets for impairment at July 31, 2013. This test did not result in any impairment of long-lived assets. There were no impairments in 2012 or 2011, exclusive of Goodwill and Indefinite-lived intangibles in 2012.

*Goodwill and Indefinite-Lived Intangibles*

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. The Company tests goodwill and had tested other indefinite lived intangibles for impairment annually as of the first day of the fourth quarter, or more frequently if indicators of potential impairment exist. Goodwill is reviewed for impairment utilizing a two-step process. The first step of the impairment test requires the identification of the reporting units and comparison of the fair value of each of these reporting units to their respective carrying value. If the carrying value of the reporting unit is less than its fair value, no impairment exists and the second step is not performed. If the carrying value of the reporting unit is higher than its fair value, the second step must be performed to compute the amount of the goodwill impairment, if any. In the second step, the impairment is computed by comparing the implied fair value of the reporting unit goodwill with the carrying amount of that goodwill. If the carrying amount of the reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized for the excess.

*Intangible Assets*

Intangible assets (exclusive of patents), arose primarily from acquisitions, and primarily consist of customer relationships, trademarks, licenses, and website and database content. Finite-lived intangible assets are amortized according to their estimated useful lives, which range from 4 to 15 years.

The Company has capitalized certain legal costs directly incurred in pursuing patent applications as patent costs. When such applications result in an issued patent, the related costs are amortized over a ten year period or the life of the patent, whichever is shorter, using the straight-line method. The Company reviews its issued patents and pending patent applications, and if it determines to abandon a patent application or that an issued patent no longer has economic value, the unamortized balance in deferred patent costs relating to that patent is immediately expensed.

*Comprehensive loss*

Comprehensive loss consists of net loss and foreign currency translation adjustments. Foreign currency translation adjustments included in comprehensive loss were not tax effected as investments in international affiliates are deemed to be permanent. Accumulated other comprehensive income is a separate component of stockholders' equity and consists of foreign currency translation adjustments.

*Shipping and Handling Costs*

Shipping and handling costs associated with the distribution of finished goods to customers are recorded in cost of goods sold.

*Research and Development*

Research and development costs are charged to expense as incurred.

*Advertising*

All costs associated with advertising are expensed as incurred. Advertising expense, included in Selling, general and administrative expense, approximated $302, $237 and $235 for the years ended July 31, 2013, 2012 and 2011, respectively.

*Income Taxes*

The Company accounts for income taxes under the liability method of accounting for income taxes. Under the liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The liability method requires that any tax benefits recognized for net operating loss carry forwards and other items be reduced by a valuation allowance when it is more likely than not that the benefits may not be realized. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under the liability method, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

It is the Company's policy to provide for uncertain tax positions and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. At July 31, 2013, the Company believes it has appropriately accounted for any unrecognized tax benefits. To the extent the Company prevails in matters for which a liability for an unrecognized tax benefit is established or is required to pay amounts in excess of the liability, the Company's effective tax rate in a given financial statement period may be affected.

(Dollars in thousands except share data)

*Segment Reporting*

The Company follows accounting pronouncements which establish standards for reporting information on operating segments in interim and annual financial statements. An enterprise is required to separately report information about each operating segment that engages in business activities from which the segment may earn revenues and incur expenses, whose separate operating results are regularly reviewed by the chief operating decision maker regarding allocation of resources and performance assessment and which exceed specific quantitative thresholds related to revenue and profit or loss. The Company's operating activities are reported in three segments (see Note 15).

*Net income (loss) per share*

Basic net income (loss) per share represents net income (loss) divided by the weighted average number of common shares outstanding during the period. The dilutive effect of potential common shares, consisting of outstanding stock options and unvested restricted stock, is determined using the treasury stock method. Diluted weighted average shares outstanding for fiscal 2013, 2012 and 2011 do not include the potential common shares from stock options and unvested restricted stock because to do so would have been antidilutive and as such is the same as basic weighted average shares outstanding. The number of potential common shares ("in the money options") and unvested restricted stock excluded from the calculation of diluted earnings per share for the years ended July 31, 2013, 2012, and 2011 was 32,000, 0, and 27,000, respectively.

For the years ended July 31, 2013, 2012 and 2011, the effect of approximately 727,000, 736,000 and 785,000 respectively, of outstanding "out of the money" options to purchase common shares were excluded from the calculation of diluted net loss per share because their effect would be anti-dilutive. The following table sets forth the computation of basic and diluted net loss per share for the years ended July 31:

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Numerator: | | | |
| Net loss | $ (18,237) | $ (39,269) | $ (12,960) |
| Denominator: | | | |
| Weighted-average common shares outstanding - Basic | 39,607 | 38,798 | 38,357 |
| Add: effect of dilutive stock options and restricted stock | — | — | — |
| Weighted-average common shares outstanding - Diluted | 39,607 | 38,798 | 38,357 |
| Net loss per share | | | |
| Basic and diluted | $ (0.46) | $ (1.01) | $ (0.34) |

*Share-Based Compensation*

The Company records compensation expense associated with stock options and restricted stock based upon the fair value of stock based awards as measured at the grant date. The expense is recorded by amortizing the fair values on a straight line basis over the vesting period, adjusted for estimated forfeitures.

For the years ended July 31, 2013, 2012 and 2011, share-based compensation expense relating to the fair value of stock options, restricted shares and restricted stock units was approximately $545, $719, and $1,049, respectively (see Note 10). No excess tax benefits were recognized for the year ended July 31, 2013, 2012 and 2011.

The following table sets forth the amount of expense related to share-based payment arrangements included in specific line items in the accompanying statement of operations for the years ended July 31:

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Cost of clinical laboratory services | $ 10 | $ 10 | $ 10 |
| Research and development | 2 | 4 | 14 |
| Selling, general and administrative | 533 | 705 | 1,025 |
| | $ 545 | $ 719 | $ 1,049 |

As of July 31, 2013, there was $531 of total unrecognized compensation cost related to nonvested share-based payment arrangements granted under the Company's incentive stock plans, which will be recognized over a weighted average remaining life of approximately fifteen months.

*Effect of new accounting pronouncements*

In June 2011, the FASB issued Accounting Standards Update No. 2011-05, "Comprehensive Income" (Topic 220) – Presentation of Comprehensive Income" (ASU No. 2011-05), which requires an entity to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. ASU 2011-05 eliminated the option to present the components of other comprehensive income as part of the statement of stockholders' equity. The Company adopted ASU 2011-05 in its first quarter of fiscal year 2013 by including the required disclosures in two separate but consecutive statements.

In September 2011, the FASB issued Accounting Standards Update No. 2011-08 "Testing Goodwill for Impairment" (ASU No. 2011-08) which is intended to reduce the complexity and costs to test goodwill for impairment. The amendment allows an entity the option to make a qualitative evaluation about the likelihood of goodwill impairment to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. An entity will no longer be required to calculate the fair value of a reporting unit unless the entity determines, based on its qualitative assessment, that it is more likely than not that the fair value of the reporting unit is less than its carrying amount. The ASU also expands upon the examples of events and circumstances that an entity should consider between annual impairment tests in determining whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. The amendment became effective for annual and interim goodwill impairment tests performed for the Company's fiscal year beginning August 1, 2012. The Company adopted ASU 2011-08 in the first quarter of fiscal year 2013 and the adoption did not have a material impact on its consolidated financial statements.

In July 2011, the FASB issued ASU No. 2011-07 "Health Care Entities (Topic 954) - Presentation and Disclosure of Patient Service Revenue, Provision for Bad Debts, and the Allowance for Doubtful Accounts for Certain Health Care Entities". This update was issued to provide greater transparency relating to accounting practices used for net patient service revenue and related bad debt allowances by health care entities. Some health care entities recognize patient service revenue at the time the services are rendered regardless of whether the entity expects to collect that amount or has assessed the patient's ability to pay. These prior accounting practices used by some health care entities resulted in a gross-up of patient service revenue and the provision for bad debts, causing difficulty for users of financial statements to make accurate comparisons and analyses of financial statements among entities. ASU No. 2011-07 requires certain healthcare entities to change the presentation of the statement of operations, reclassifying the provision for bad debts associated with patient service revenue from an operating expense to a deduction from patient service revenue and also requires enhanced quantitative and qualitative disclosures relevant to the entity's policies for recognizing revenue and assessing bad debts. This update is not designed to change and will not change the net income reported by healthcare entities. The Company adopted this update in its first quarter of fiscal year 2013 with no impact on its consolidated financial position or results of operations.

In July 2012, the FASB issued ASU 2012-02, "Intangibles - Goodwill and Other (Topic 350): Testing Indefinite-Lived Intangible Assets for Impairment" (ASU 2012-02), which permits an entity to make a qualitative assessment of whether it is more likely than not that the fair value of a reporting unit's indefinite-lived intangible asset is less than the asset's carrying value before applying the two-step goodwill impairment model that is currently in place. If it is determined through the qualitative assessment that the fair value of a reporting unit's indefinite-lived intangible asset is more likely than not greater than the asset's carrying value, the remaining impairment steps would be unnecessary. The qualitative assessment is optional, allowing companies to go directly to the quantitative assessment. ASU 2012-02 is effective for the Company for annual and interim indefinite-lived intangible asset impairment tests performed beginning August 1, 2013, however early adoption is permitted. As the Company has no indefinite-lived intangibles, ASU 2012-02 is expected to have no impact on its consolidated financial statements.

(Dollars in thousands except share data)

**Note 2 – Goodwill and intangible assets**

The Company's change in the net carrying amount of goodwill by business segment is as follows:

| | Enzo Life Sciences | Enzo Clinical Labs | Total |
|---|---|---|---|
| August 1, 2011 | $ 19,921 | $ 7,452 | $ 27,373 |
| Foreign currency translation | (1,083) | — | (1,083) |
| Impairment charge | (18,838) | — | (18,838) |
| July 31, 2012 and 2013 | $ — | $ 7,452 | $ 7,452 |

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. The Company tests goodwill and had tested other indefinite-lived intangibles for impairment annually as of the first day of the fourth quarter, or more frequently if indicators of potential impairment exist. Goodwill is reviewed for impairment utilizing a two-step process. The first step of the impairment test requires the identification of the reporting units and comparison of the fair value of each of these reporting units to their respective carrying value. If the carrying value of the reporting unit is less than its fair value, no impairment exists and the second step is not performed. If the carrying value of the reporting unit is higher than its fair value, the second step must be performed to compute the amount of the goodwill impairment, if any. In the second step, the impairment is computed by comparing the implied fair value of the reporting unit goodwill with the carrying amount of that goodwill. If the carrying amount of the reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized for the excess.

The Company estimates the fair value of a reporting unit using a forward-looking discounted cash flow methodology. The assumptions included in the discounted cash flow methodology included among others; forecasted revenues based on historical and recent revenue trends, gross profit margins, operating income margins, working capital cash flow, perpetual growth rates, and long-term discount rates, all of which require significant judgments by management. As of the first day of the fourth quarter of 2013, the annual assessment date, the Company's test did not indicate impairment at the Clinical Lab's reporting unit.

**(Dollars in thousands except share data)**

As a result of decline in the Company's market capitalization, relating to the decline in the Company's stock price of 44% from May 1 to July 31, 2012, declining results in the fiscal 2012 fourth quarter and results from the completion of the refocusing of the Enzo Life Sciences reporting unit, the Company determined that these impairment factors required the completion of an interim impairment test as of July 31, 2012. Based upon the results of the interim impairment test as of July 31, 2012, the carrying value of the Enzo Life Sciences reporting unit was determined to be higher than its fair value and, accordingly, the Company performed a step two impairment analysis. The results of the step-two impairment analysis for the Enzo life Sciences reporting unit indicated that goodwill was fully impaired. As a result of the analysis the Company recognized a total non-cash impairment charge of $18.8 million ($18.0 net of related taxes) as of July 31, 2012. The impairment charge did not impact the Company's consolidated cash flows, liquidity, and capital resources. The fair value of the Enzo Clinical Lab reporting unit was higher than its carrying value and therefore a step-two analysis was not required.

Intangible assets

The Company's change in the net carrying amount of intangible assets, all in the Life Sciences segment is as follows:

| | Gross | Accumulated Amortization | Net |
|---|---|---|---|
| August 1, 2011 | $ 34,838 | (14,853) | 19,985 |
| Amortization expense | — | (1,660) | (1,660) |
| Foreign currency translation | (1,232) | 389 | (843) |
| Trademark impairment charge | (5,702) | — | (5,702) |
| July 31, 2012 | 27,904 | (16,124) | 11,780 |
| Amortization expense | — | (1,990) | (1,990) |
| Foreign currency translation | 310 | (157) | 153 |
| July 31, 2013 | $ 28,214 | (18,271) | 9,943 |

Intangible assets consist of the following:

| | July 31, 2013 | | | July 31, 2012 | | |
|---|---|---|---|---|---|---|
| | **Gross** | **Accumulated Amortization** | **Net** | **Gross** | **Accumulated Amortization** | **Net** |
| Finite-lived intangible assets: | | | | | | |
| Patents | $ 11,027 | $ (10,587) | $ 440 | $ 11,027 | $ (10,439) | $ 588 |
| Customer relationships | 12,446 | (5,448) | 6,998 | 12,304 | (4,356) | 7,948 |
| Website and acquired content | 1,026 | (980) | 46 | 1,019 | (874) | 145 |
| Licensed technology and other | 513 | (382) | 131 | 485 | (300) | 185 |
| Trademarks, gives effect for impairment charge and reclassification to finite-lived as of May 1, 2012 | 3,202 | (874) | 2,328 | 3,069 | (155) | 2,914 |
| Total | $ 28,214 | $ (18,271) | $ 9,943 | $ 27,904 | $ (16,124) | $ 11,780 |

(Dollars in thousands except share data)

At July 31, 2013 information with respect to the intangibles acquired is as follows:

| | Useful life assigned | Weighted average remaining useful life |
|---|---|---|
| Customer relationships | 8-15 years | 7 years |
| Trademarks | 5 years | 4 years |
| Other intangibles | 4-5 years | 2 years |

At July 31, 2013, the weighted average useful lives of amortizable intangible assets were approximately six years.

Estimated amortization expense related to these finite-lived intangible assets for the five succeeding fiscal years ending July 31 is as follows:

| | |
|---|---|
| 2014 | $ 1,671 |
| 2015 | 1,630 |
| 2016 | 1,620 |
| 2017 | 1,508 |
| 2018 | 1,141 |

Amortization expense for the years ended July 31, 2013, 2012, and 2011 was $1,990, $1,660, and $1,507, respectively.

In connection with the annual assessment of indefinite-lived intangibles as of May 1, 2012, the Company determined the estimated fair value of trademarks, relating to the Enzo Life Science reporting unit, were less than their carrying values by $5.7 million primarily due to declines in projected revenues and in connection with future plans resulting from a strategic review. As a result of this impairment, which included a change in the future branding strategy, the useful life of the trademarks were reassessed and determined to have an estimated economic life of 5 years. A non-cash impairment charge of $5.7 million, ($4.4 million net of related taxes) was recorded for the trademark impairment in the fourth quarter of fiscal 2012. As a result of the reclassification of trademarks from indefinite lived to a 5 year life, annual amortization of trademarks is estimated to be $0.6 million per year. No impairment was determined to exist at May 1, 2013.

The aggregate goodwill and indefinite lived-intangible impairment charge recorded in the fiscal 2012 fourth quarter was $24.5 million, ($22.4 million net of related taxes). These charges did not affect consolidated cash flows, current liquidity or capital resources.

**Note 3 - Supplemental disclosure for statement of cash flows**

In the years ended July 31, 2013, 2012, and 2011 income taxes paid by the Company approximated $46, $70, and $107 respectively .

In the years ended July 31, 2013, 2012, and 2011, interest paid by the Company approximated $69, $5, and $5 respectively.

During fiscal 2013 and 2012, the Company financed $365 and $182, respectively, in machinery and transportation equipment under installment loans.

During fiscal 2013, the Company entered into a capital lease for machinery and equipment with a cost basis of $765.

(Dollars in thousands except share data)

**Note 4 - Inventories**

Inventories consisted of the following at July 31:

| | 2013 | 2012 |
|---|---|---|
| Raw materials | $ 922 | $ 1,283 |
| Work in process | 2,628 | 2,821 |
| Finished products | 5,255 | 4,696 |
| | $ 8,805 | $ 8,800 |

**Note 5 – Property, plant, and equipment**

At July 31, 2013 and 2012 property, plant, and equipment consist of:

| | 2013 | 2012 |
|---|---|---|
| Building and building improvements | $ 4,751 | $ 4,751 |
| Machinery and equipment (includes asset under capital lease – see Note 9) | 6,922 | 6,760 |
| Office furniture and computer equipment | 16,390 | 14,879 |
| Leasehold improvements | 4,759 | 4,498 |
| | 32,822 | 30,888 |
| Accumulated depreciation and amortization | (24,917) | (22,484) |
| | 7,905 | 8,404 |
| Land and land improvements | 712 | 712 |
| | $ 8,617 | $ 9,116 |

(Dollars in thousands except share data)

**Note 6 - Income taxes**

The benefit (provision) for income taxes for fiscal years ended July 31 is as follows:

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Current (provision) benefit: | | | |
| Federal | $ — | $ — | $ 8 |
| State and local | (46) | (49) | (161) |
| Foreign | (1) | (61) | 33 |
| Deferred benefit (provision) | 759 | 1,762 | (17) |
| Benefit (provision) for income taxes | $ 712 | $ 1,652 | $ (137) |

Deferred tax assets and liabilities arise from temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements. The components of deferred tax assets (liabilities) as of July 31 are as follows:

| | 2013 | 2012 |
|---|---|---|
| Deferred tax assets: | | |
| Federal tax carryforward losses | $ 34,836 | $ 29,531 |
| Provision for uncollectible accounts receivable | 920 | 1,263 |
| State and local tax carry forward losses | 3,791 | 2,914 |
| Accrued royalties | 143 | 143 |
| Stock compensation | 317 | 450 |
| Depreciation | 625 | 445 |
| Research and development and other tax credit carryforwards | 1,013 | 795 |
| Foreign tax carryforward losses | 772 | 108 |
| Intangibles | 2,980 | 2,903 |
| Inventory | 1,249 | 1,630 |
| Accrued expenses | 1,622 | 909 |
| Other, net | 19 | 15 |
| Deferred tax assets | 48,287 | 41,106 |
| | | |
| Deferred tax liabilities: | | |
| Deferred patent costs | (132) | (139) |
| Prepaid expenses | (695) | (613) |
| Other, net | (37) | (31) |
| Deferred tax liabilities | (864) | (783) |
| | | |
| Net deferred tax assets (liabilities) before valuation allowance | 47,423 | 40,323 |
| Less: valuation allowance | (47,623) | (41,261) |
| Net deferred tax liabilities | $ (200) | $ (938) |

(Dollars in thousands except share data)

At July 31, 2013, the Company had net deferred tax liabilities of approximately $0.2 million which consists primarily of identifiable intangible assets and cumulative tax deductions in excess of book expenses recognized by foreign subsidiaries.

Net deferred tax liabilities are included in the consolidated balance sheets as of July 31 as follows:

| | 2013 | 2012 |
|---|---|---|
| Deferred taxes: | | |
| Current | $ — | $ — |
| Non-current | 200 | 938 |
| | $ 200 | $ 938 |

The Company recorded a valuation allowance during the year ended July 31, 2013 and 2012 equal to domestic and certain foreign net deferred tax assets. The Company believes that the valuation allowance is necessary as it is not more likely than not that the deferred tax assets will be realized in the foreseeable future based on positive and negative evidence available at this time. This conclusion was reached because of uncertainties relating to future taxable income, in terms of both its timing and its sufficiency, which would enable the Company to realize the deferred tax assets.

As of July 31, 2013, the Company had U.S. federal net operating loss carryforwards of approximately $102.5 million. The U.S. federal tax loss carryforwards, if not fully utilized, expire between 2018 and 2033. Utilization is dependent on generating sufficient taxable income prior to expiration of the tax loss carryforwards. In addition, the Company has research and development tax credit carryforwards of approximately $0.9 million which expire between 2025 and 2033. As of July 31, 2013, the Company had foreign loss carryforwards of approximately $3.7 million.

As a result of certain acquisitions approximately $0.7 million of the Company's U.S. federal net operating loss carryforwards are subject to an annual limitation under Internal Revenue Code Section 382 due to the ownership change. However, management does not believe that such a change would have a significant impact on the Company's ability to utilize its tax loss carryforwards. The components of loss before income taxes consisted of the following for the years ended July 31:

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| United States operations | $ (15,419) | $ (31,817) | $ (12,284) |
| International operations | (3,530) | (9,104) | (539) |
| Loss before taxes | $ (18,949) | $ (40,921) | $ (12,823) |

The benefit (provision) for income taxes were at rates different from U.S. federal statutory rates for the following reasons for the years ended July 31:

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Federal statutory rate | 34.0% | 34.0% | 34.0% |
| Expenses not deductible for income tax return purposes | (0.9) | (0.5) | (2.3) |
| State income taxes, net of benefit of federal tax deduction | 2.5 | 0.9 | 1.0 |
| Change in valuation allowance | (32.7) | (23.2) | (34.6) |
| Impairment of goodwill | — | (7.1) | — |
| Reversal of tax reserve | — | — | 0.1 |
| Other | 0.9 | (0.1) | 0.7 |
| | 3.8% | 4.0% | (1.1)% |

U.S. federal income taxes have not been provided on approximately $252 of undistributed earnings at the Company's foreign subsidiaries at July 31, 2013, because it is the Company's intent to keep the earnings reinvested. As of July 31, 2013, the Company has no liabilities for uncertain tax positions. It is the Company's policy to record interest and penalties as a component of tax expense. The Company files income tax returns in the U.S. Federal jurisdiction, various U.S. state jurisdictions and several foreign jurisdictions. With few exceptions, the years that remain subject to examination are years July 31, 2010 through 2012.

(Dollars in thousands except share data)

**Note 7 – Loan Payable**

On June 7, 2013, the Company entered into a secured Revolving Loan and Security Agreement (the "Credit Agreement") among the Company and certain of its subsidiaries, with Enzo Therapeutics as a guarantor, and Healthcare Finance Group, LLC (the "Lender).The Credit Agreement, which expires in December 2016, provides for borrowings against eligible US receivables, as defined, of the Clinical Lab and Life Science segments up to $8.0 million at defined eligibility percentages and provides for additional borrowings of $4.0 million for increased eligible assets. Debt issuance costs of $281 are being amortized over the life of the Credit Agreement. If the amount of borrowings outstanding under the revolving credit facility exceeds the borrowing base then in effect, or the Lender requires a reserve, the Company will be required to repay such borrowings in an amount sufficient to eliminate such excess. Interest on advances, payable monthly, is based on the three month LIBOR rate, with a floor of 1.25% plus an applicable margin of 4.0%, In the event of any default, the interest rate may be increased 3.0% over the current rate. The facility also carries a non-utilization fee of 0.50% per annum, payable monthly, on the unused portion of the credit line. The Credit Agreement requires a minimum borrowing of $2.0 million. At July 31, 2013, the borrowings under the Credit Agreement related to the Clinical Lab receivables aggregated $3.3 million with an additional availability of $0.2 million. Commencement of borrowing against the eligible Life Science receivables requires advance notification to the Lender.

The Company's obligations under the Credit Agreement are secured by primarily all the unencumbered U.S. assets of the Company, excluding buildings and intellectual property which the Lender has a negative pledge, and the capital stock of subsidiaries. The Credit Agreement includes customary affirmative and negative covenants and events of default and requires maximum levels of cash usage and minimum levels of liquidity, as defined, and provides for increased liquidity levels if operating results are not achieved. Negative covenants include among others, limitations on additional debt, liens, loans or investments, distributions, asset sales and affiliate transactions. Events of default include, non-payment of principal and interest on debt outstanding, non-performance of covenants, material change in business, breach of representations, bankruptcy and insolvency, material judgments and changes in control. As of July 31, 2013, the Company received a waiver from the Lender for non-compliance with a financial covenant and the lender modified various financial covenants relating to fiscal 2014. In fiscal 2014, the Company expects to be in compliance with the modified financial covenants.

**Note 8 – Accrued Liabilities, Other Current Liabilities and Other Liabilities**

At July 31 accrued liabilities consist of:

| | 2013 | 2012 |
|---|---|---|
| Legal | $ 3,104 | $ 1,475 |
| Payroll, benefits, severance and commissions | 4,794 | 5,125 |
| Research and development | 721 | 696 |
| Professional fees | 863 | 901 |
| Other | 2,294 | 1,621 |
| | $ 11,776 | $ 9,818 |

At July 31 other current liabilities consist of:

| | 2013 | 2012 |
|---|---|---|
| Capital Lease Obligations – see Note 9 | $ 149 | $ — |
| Installment Loans – see Note 9 | 182 | 118 |
| | $ 331 | $ 118 |

*Self-Insured Medical Plan*

The Company self-funds medical insurance coverage for certain of its U.S. based employees. The risk to the Company is being limited through the use of individual and aggregate stop loss insurance. As of July 31, 2013 and 2012, the Company has established a reserve of $0.2 million and $0.4 million, respectively, which is included in accrued liabilities, for claims that have been reported but not paid and incurred but not reported. The reserve is based upon the Company's historical payment trends, claim history and current estimates.

(Dollars in thousands except share data)

**Note 9 – Other liabilities**

At July 31 Other liabilities consist of:

| | 2013 | 2012 |
|---|---|---|
| Capital lease obligation | $ 505 | $ — |
| Installment loans | 269 | 128 |
| | $ 774 | $ 128 |

The capital lease obligation and installment loans are for machinery and equipment used in the Clinical Labs segment. Amortization of the asset recorded under the capital lease is included in depreciation expense. At July 31, 2013, the accumulated amortization on the capital lease was $141.

Future minimum lease and loan payments are as follows:

| | Capital lease | Installment loans |
|---|---|---|
| 2014 | $ 176 | $ 183 |
| 2015 | 176 | 123 |
| 2016 | 176 | 89 |
| 2017 | 176 | 47 |
| 2018 | 28 | 10 |
| Total payments | 732 | 452 |
| Less: imputed interest | (79) | — |
| Payments net of interest | 653 | 452 |
| Less: current portion | (148) | (183) |
| Other liabilities – net | $ 505 | $ 269 |

The weighted average interest rate on our short term borrowings during fiscal 2013 was 4.5%. The weighted average interest rate on our short term borrowings during fiscal 2012 was 1.9%.

**Note 10 – Stockholders' equity**

***Controlled Equity Offering***

On March 28, 2013, the Company entered into a Controlled Equity Offering $^{SM}$ Sales Agreement (the "Sales Agreement") with Cantor Fitzgerald & Co., as sales agent ("Cantor"). Under the Sales Agreement, the Company may offer and sell, from time to time, through Cantor, shares of the Company's common stock, par value $0.01 per share (the "Common Stock"), having an aggregate offering price of up to $20.0 million (the "Shares"). The Company will pay Cantor a commission of 3.0% of the aggregate gross proceeds received under the Sale Agreement. The Company is not obligated to make any sales of the Shares under the Sales Agreement. The offering of Shares pursuant to the Sales Agreement will terminate upon the earlier of (a) the sale of all of the Shares subject to the Sales Agreement or (b) the termination of the Sales Agreement by Cantor or the Company, as permitted therein. The Shares were initially issued pursuant to the Company's Registration Statement which was declared effective on August 5, 2010 and the prospectus supplement, dated March 28, 2013, and more recently under a current registration statement declared effective August 13, 2013 and the prospectus supplement dated August 1, 2013, filed by the Company with the Securities and Exchange Commission. During fiscal 2013, the Company sold an aggregate of 906,715 shares of common stock under the Sales Agreement at an average price of $2.26 per share and received proceeds aggregating $1,825, net of expenses of the offering and commissions of $224.

*Common stock*

In June 2012, the Company issued 275,000 shares of common stock at a fair value of $0.5 million for services performed.

(Dollars in thousands except share data)

*Treasury stock*

In fiscal 2013, the Company issued 216,556 shares from treasury stock to match a portion of its employees' 401(k) contributions. The Company recorded an expense of $643 for the match, reducing treasury stock by $3,074 for the average acquisition cost of such shares and adjusting additional paid in capital by $2,458.

In fiscal 2012, the Company issued 233,458 shares from treasury stock for its employees' 401(k) matched contributions obligation. The Company recorded an expense of $649 for the match, reducing treasury stock by $3,313 for the average acquisition cost of such shares and adjusting additional paid in capital by $2,664.

In fiscal 2011, the Company issued 173,834 shares from treasury stock for its employees' 401(k) matched contributions obligation. The Company recorded an expense of $690 for the match, reducing treasury stock by $2,467 for the average acquisition cost of such shares and adjusting additional paid in capital by $1,777.

*Incentive stock plans*

The Company has an incentive stock option plan (the "1999 Plan") and an incentive stock option and restricted stock award plan (the "2005 Plan"), under which the Company may grant options for up to 2,312,356 common shares under the 1999 Plan and options and restricted stock awards for up to 1,000,000 common shares under the 2005 Plan. No additional awards may be granted under the 1999 or 2005 Plans. On January 14, 2011, the Company's stockholders approved the adoption of the 2011 Incentive Plan (the "2011 Plan") which provides for the issuance of equity awards, including among others, options, restricted stock and restricted stock units for up to 3,000,000 Common Shares. The exercise price of options granted under the 2011 Plan, and consistent with other Plans, is equal to or greater than fair market value of the Common Stock on the date of grant. Unless terminated earlier by the Board of Directors, the 2011 Plan will terminate at the earliest of; (a) such time as no shares of Common Stock remain available for issuance under the 2011 Plan or (b) tenth anniversary of the effective date of the 2011 Plan. Awards outstanding upon expiration of the 2011 Plan shall remain in effect until they have been exercised, terminated, or have expired. As of July 31, 2013, there were approximately 2,322,000 shares available for grant under the 2011 Plan.

The Company estimates the fair value of each stock option award on the measurement date using a binomial option pricing model. The fair value of the award is amortized to expense on a straight line basis over the requisite service period. The Company expenses restricted stock awards based on vesting requirements, primarily time elapsed.

Options granted pursuant to the plans may be either incentive stock options or non-statutory options The 2011 Plan provides for the issuance of stock options, restricted stock and restricted stock unit awards which generally vest over a two to four year period. A summary of the information pursuant to the Company's stock option plans for the years ended July 31, 2013, 2012, and 2011 is as follows:

| | 2013 | | 2012 | | 2011 | |
|---|---|---|---|---|---|---|
| | Options | Weighted - Average Exercise Price | Options | Weighted - Average Exercise Price | Options | Weighted - Average Exercise Price |
| Outstanding at beginning of year | 736,490 | $ 14.50 | 785,124 | $ 14.53 | 1,132,450 | $ 14.30 |
| New Grants | 336,817 | $ 2.88 | — | $ — | — | $ — |
| Expired | (346,662) | $ 11.82 | (48,634) | $ 15.05 | (347,326) | $ 13.78 |
| Outstanding at end of year | 726,645 | $ 10.39 | 736,490 | $ 14.50 | 785,124 | $ 14.53 |
| Exercisable at end of year | 389,828 | $ 16.88 | 736,490 | $ 14.50 | 785,124 | $ 14.53 |
| Weighted average fair value of options granted during year | | $ 1.22 | | $ — | | — |

There is no aggregate intrinsic value of options either outstanding or exercisable at July 31, 2013.

(Dollars in thousands except share data)

On January 17, 2013, the Company awarded 336,817 options to directors and certain officers with an exercise price of $2.88 and a five year term, of which 247,672 options vest over two years and 89,145 vest over three years. The weighted average assumptions used to fair value this option award were as follows: expected life of 3.3 years, expected volatility 60.8%, risk free interest rate of 0.45% and no dividend yield. As of July 31, 2013, none of these options were vested.

The following table summarizes information for stock options outstanding at July 31, 2013:

| | Options outstanding and exercisable | | |
|---|---|---|---|
| Range of Exercise prices | Shares | Weighted- Average Remaining Contractual Life in years | Weighted-Average Exercise Price |
| $ 2.88 | 336,817 | 4.47 | $ 2.88 |
| $12.99-17.66 | 389,828 | 0.94 | $ 17.04 |
| | 726,645 | | |

*Restricted Stock Awards*

During fiscal 2013, 2012 and 2011, the compensation committee of the Company's board of directors approved grants of restricted stock and restricted stock unit awards (the "Awards"), respectively, to the Company's directors, certain officers and certain employees under the 2005 and 2011 Plans. The Awards vest upon the recipient's continued employment or director service ratably over either two, three or four years. Share-based compensation expense is based on the fair value of the award as measured on the grant date and is recorded over the vesting period on a straight-line basis. The Awards will be forfeited if the recipient ceases to be employed by or serve as a director of the Company, as defined in the Plans' terms. The Awards settle in shares of the Company's common stock on a one-for-one basis.

A summary of the information pursuant to the Company's Restricted Stock Awards for the years ended July 31, 2013, 2012 and 2011 is as follows:

| | 2013 | | 2012 | | 2011 | |
|---|---|---|---|---|---|---|
| | Awards | Weighted - Average Award Price | Awards | Weighted - Average Award Price | Awards | Weighted - Average Award Price |
| Outstanding at beginning of year | 257,583 | $ 3.58 | 311,952 | $ 4.84 | 417,578 | $ 5.50 |
| Awarded | 39,000 | $ 1.77 | 144,143 | $ 2.51 | 181,643 | $ 3.78 |
| Vested | (157,783) | $ (3.23) | (174,638) | $ (4.85) | (263,112) | $ (5.11) |
| Forfeited | (13,667) | $ (3.59) | (23,874) | $ (4.30) | (24,157) | $ (5.27) |
| Outstanding at end of year | 125,133 | $ 3.45 | 257,583 | $ 3.58 | 311,952 | $ 4.84 |
| Weighted average market value of awards granted during year | | $ 1.77 | | $ 2.51 | | $ 3.78 |

(Dollars in thousands except share data)

**Note 11 - Employee benefit plan**

The Company has a qualified Salary Reduction Profit Sharing Plan (the "Plan") for eligible U.S. employees under Section 401(k) of the Internal Revenue Code. The Plan provides for voluntary employee contributions through salary reduction and voluntary employer contributions at the discretion of the Company. For the years ended July 31, 2013, 2012, and 2011, the Company authorized employer matched contributions of 50% of the employees' contribution up to 10% of the employees' compensation, payable in Enzo Biochem, Inc. common stock. The share-based 401(k) employer matched contribution was approximately $643, $649, and $690 in fiscal years 2013, 2012, and 2011, respectively.

The Company's Swiss operations provide a pension plan named the Enzo Life Sciences (ELS) AG Vertrag - Nr. 601013, (the "Swiss Plan") under the Swiss government's social security system for Swiss employees. The current required minimum contribution is 8% and minimum annual investment return is 2%. Employees are required to contribute based on a formula and the Company's Swiss operations make contributions of at least 50% of the employee contribution. The status of the Swiss Plan, which is substantially funded as of December 31, 2012, the latest plan year end, is as follows:

| **As of December 31,** | **2012** | **2011** | **2010** |
|---|---|---|---|
| Total Assets | $ 2,964,952 | $ 3,247,099 | $ 3,080,281 |
| Accumulated Benefit Obligation | $ 3,064,058 | $ 3,224,370 | $ 3,083,361 |
| Funded status | 97% | 99% | 100% |

| **Fiscal Year ended July 31,** | **2012** | **2011** | **2010** |
|---|---|---|---|
| Contributions | $ 521,000 | $ 483,000 | $ 480,000 |

The Swiss Plan's contract expires December 31, 2014 and currently the Company has no plans to change the current funding or plan design. No events have occurred that would impact the Swiss Plan status.

**Note 12 – Royalty and other income**

The Company has a license agreement with Qiagen that began in 2005, whereby the Company earns quarterly running royalties on the net sales of Qiagen products subject to the license until the expiration of the patent on April 24, 2018. During the years ended July 31, 2013, 2012 and 2011, the Company recorded royalty income under the agreement of approximately $5,144, $5,900 and $6,800, respectively, which is included in the Life Sciences segment.

(Dollars in thousands except share data)

**Note 13 – Commitments**

*Leases*

The Company leases equipment, office and laboratory space under several non-cancelable operating leases that expire between September 2013 and May 2023. Certain leases include renewal options and rent escalation clauses. An entity owned by certain executive officers/directors of the Company owns the building that the Company leases as its main facility for laboratory operations and certain research operations. In March 2005, the Company amended and extended the lease for another 12 years. In addition to the minimum annual rentals of space, the lease is subject to annual increases, based on the consumer price index. Annual increases are limited to 3% per year. Rent expense, inclusive of real estate taxes, approximated $1,605, $1,556 and $1,509 during fiscal years 2013, 2012 and 2011, respectively.

Total rent expense incurred by the Company during fiscal 2013, 2012 and 2011 was approximately $4,354, $4,378 and $4,023, respectively. Minimum future annual rentals under non-cancelable operating leases, net of sublease rental income of $451, as of July 31, 2013, are as follows:

| Years ended July 31, | |
|---|---|
| 2014 | $ 4,346 |
| 2015 | 4,163 |
| 2016 | 3,810 |
| 2017 | 2,868 |
| 2018 | 1,477 |
| Thereafter | 2,516 |
| | $ 19,180 |

*Employment Agreements*

The Company has employment agreements with certain officers that are cancelable at any time but provide for severance pay in the event an officer is terminated by the Company without cause, as defined in the agreements. Unless cancelled earlier or with notice as defined, the agreement automatically renews for two years. Aggregate minimum compensation commitments, exclusive of any severance provisions, as of July 31, 2013 is $2,271.

**Note 14 – Contingencies**

The Company, as plaintiff, is currently engaged in litigation in the United States District Court for the Southern District of New York against six parties (and certain of their related companies): Amersham plc, Perkin Elmer, Inc., Molecular Probes, Inc., Orchid Biosciences, Inc., Affymetrix, Inc., and Roche Diagnostic GmbH (“Roche”). These cases were commenced at various times from October 2002 to June 2004. In each of the six cases, the Company asserts similar (with some differences) causes of action against the defendants which can be generally described as contract, tort, fraud, and patent claims, except that no patent claims are asserted against Affymetrix. In the Roche case, Roche seeks a declaratory judgment of non-breach and patent invalidity against the Company. The cases were consolidated for pre-trial purposes in 2004 and there has been extensive discovery among the parties. In 2011, the defendants moved for summary judgment of non-infringement regarding the Company’s patent claims. In 2012, those motions were granted in part and denied in part. In December 2012, all six defendants moved for summary judgment on the Company’s non-patent claims. Additional discovery was taken and the Company responded to the motions in May 2013. Those motions are now fully briefed, but have not yet been decided. The Company expects that the pending motions will be decided by October 31, 2013.

On June 7, 2004, the Company and Enzo Life Sciences, Inc., filed suit in the United States District Court for the District of Connecticut against Applera Corporation and its wholly-owned subsidiary Tropix, Inc., now Life Technologies, Inc. (NASDAQ:LIFE). The complaint alleged infringement of six patents relating to DNA sequencing systems, labeled nucleotide products, and other technology. Yale University is the owner of four of the patents and the Company is the exclusive licensee. These four patents are commonly referred to as the “Ward” patents. On November 12, 2012, a jury in New Haven found that one of these patents (United States Patent No. 5,449,667) was infringed and not proven invalid. The jury awarded $48.5 million for this infringement. Prejudgment interest should provide for additional recovery in the tens of millions of dollars.

Life Technologies will likely appeal and there can be no assurance that the Company will be successful in this litigation. Even if the Company is not successful, management does not believe that there will be a significant adverse monetary impact on the Company.

In 2012, the Company received a Subpoena Duces Tecum (the "Subpoena") from the federal Department of Health and Human Services, Office of Inspector General ("OIG"). The Subpoena was issued as part of an investigation being conducted by the US Attorney's Office for the Eastern District of New York in conjunction with the OIG. While a number of potential issues were raised initially by the government, the investigation has come to focus primarily on certain practices relating to an alleged failure to collect diagnosis codes from physicians who ordered tests through Enzo Clinical Labs. The time period covered by the investigation is from 2004 through 2011. In response to the Subpoena, the Company is cooperating with the government and has provided documents as requested and no claim has yet been asserted by the OIG. The Company continues to review the methodologies around the matters raised as well as the facts that impact them. Due to the on-going review, various questions of fact and the continuing discussions with the government the Company is unable at this time to predict the outcome or estimate the potential impact that could result from the final resolution of the investigation.

The Company is party to other claims, legal actions, complaints, and contractual disputes that arise in the ordinary course of business. The Company believes that any liability that may ultimately result from the resolution of these matters will not, individually or in the aggregate, have a material adverse effect on its financial position or results of operations.

**Note 15 – Segment reporting**

The Company has three reportable segments: Life Sciences, Clinical Labs and Therapeutics. The Company's Life Sciences segment develops, manufactures, and markets products to research and pharmaceutical customers. The Clinical Labs segment provides diagnostic services to the health care community. The Company's Therapeutics segment conducts research and development activities for therapeutic drug candidates. The Company evaluates segment performance based on segment income (loss) before taxes. Costs excluded from segment income (loss) before taxes and reported as "Other" consist of corporate general and administrative costs which are not allocable to the three reportable segments.

Management of the Company assesses assets on a consolidated basis only and therefore, assets by reportable segment have not been included in the reportable segments below. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies.

(Dollars in thousands except share data)

The following financial information represents the operating results of the reportable segments of the Company:

**Year ended July 31, 2013**

| | Clinical Labs | Life Sciences | Therapeutics | Other | Consolidated |
|---|---|---|---|---|---|
| Revenues: | | | | | |
| Clinical laboratory services | $ 55,889 | — | — | — | $ 55,889 |
| Product revenues | — | $ 32,526 | — | — | 32,526 |
| Royalty and license fee income | — | 5,292 | — | — | 5,292 |
| Total revenues | 55,889 | 37,818 | — | — | 93,707 |
| Operating expenses: | | | | | |
| Cost of clinical laboratory services | 38,251 | — | — | — | 38,251 |
| Cost of product revenues | — | 16,584 | — | — | 16,584 |
| Research and development | 294 | 2,356 | $ 1,239 | — | 3,889 |
| Selling, general and administrative | 19,942 | 15,511 | — | $ 8,201 | 43,654 |
| Provision for uncollectible accounts receivable | 4,232 | 264 | — | — | 4,496 |
| Legal | 316 | 57 | — | 5,440 | 5,813 |
| Total operating expenses | 63,035 | 34,772 | 1,239 | 13,641 | 112,687 |
| Operating income (loss) | (7,146) | 3,046 | (1,239) | (13,641) | (18,980) |
| Other income (expense) | | | | | |
| Interest | (46) | 13 | — | (21) | (54) |
| Other | 49 | (71) | — | 27 | 5 |
| Foreign exchange gain | — | 80 | — | — | 80 |
| (Loss) income before income taxes | $ (7,143) | $ 3,066 | $ (1,239) | $ (13,635) | $ (18,949) |
| Depreciation and amortization included above | $ 1,377 | $ 3,102 | $ 22 | $ 104 | $ 4,605 |
| Share-based compensation included in above: | | | | | |
| Cost of clinical laboratory services | $ 9 | $ 1 | — | — | $ 10 |
| Research and development | — | 2 | — | — | 2 |
| Selling, general and administrative | 36 | 10 | — | $ 487 | 533 |
| Total | $ 45 | $ 13 | — | $ 487 | $ 545 |
| Capital expenditures | $ 757 | $ 231 | — | — | $ 988 |

(Dollars in thousands except share data)

The following financial information represents the operating results of the reportable segments of the Company:

**Year ended July 31, 2012**

| | Clinical Labs | Life Sciences | Therapeutics | Other | Consolidated |
|---|---|---|---|---|---|
| Revenues: | | | | | |
| Clinical laboratory services | $ 59,403 | — | — | — | $ 59,403 |
| Product revenues | — | $ 37,722 | — | — | 37,722 |
| Royalty and license fee income | — | 5,958 | — | — | 5,958 |
| Total revenues | 59,403 | 43,680 | — | — | 103,083 |
| Operating expenses: | | | | | |
| Cost of clinical laboratory services | 36,305 | — | — | — | 36,305 |
| Cost of product revenues | — | 19,668 | — | — | 19,668 |
| Research and development | 299 | 4,308 | $ 1,686 | — | 6,293 |
| Selling, general and administrative | 20,856 | 18,305 | — | $ 8,767 | 47,928 |
| Provision for uncollectible accounts receivable | 4,987 | 117 | — | — | 5,104 |
| Legal | 262 | 536 | — | 2,926 | 3,724 |
| Impairment charges | — | 24,540 | — | — | 24,540 |
| Total operating expenses | 62,709 | 67,474 | 1,686 | 11,693 | 143,562 |
| Operating loss | (3,306) | (23,794) | (1,686) | (11,693) | (40,479) |
| Other income (expense) | | | | | |
| Interest | (5) | 23 | — | 3 | 21 |
| Other | 28 | 27 | — | 22 | 77 |
| Foreign exchange loss | — | (540) | — | — | (540) |
| Loss before income taxes | $ (3,283) | $ (24,284) | $ (1,686) | $ (11,668) | $ (40,921) |
| Depreciation and amortization included above | $ 1,092 | $ 3,217 | $ 43 | $ 125 | $ 4,477 |
| Share-based compensation included in above: | | | | | |
| Cost of clinical laboratory services | $ 10 | | — | — | $ 10 |
| Research and development | — | $ 4 | — | — | 4 |
| Selling, general and administrative | 49 | 59 | — | $ 597 | 705 |
| Total | $ 59 | $ 63 | — | $ 597 | $ 719 |
| Capital expenditures | $ 921 | $ 443 | — | — | $ 1,364 |

(Dollars in thousands except share data)

**Year ended July 31, 2011**

| | Clinical Labs | Life Sciences | Therapeutics | Other | Consolidated |
|---|---|---|---|---|---|
| Revenues: | | | | | |
| Clinical laboratory services | $ 52,762 | | — | — | $ 52,762 |
| Product revenues | — | $ 41,830 | — | — | 41,830 |
| Royalty and license fee income | — | 7,437 | — | — | 7,437 |
| Total revenues | 52,762 | 49,267 | — | — | 102,029 |
| Operating expenses: | | | | | |
| Cost of clinical laboratory services | 31,682 | — | — | — | 31,682 |
| Cost of product revenues | — | 22,137 | — | — | 22,137 |
| Research and development | — | 5,784 | $ 2,022 | — | 7,806 |
| Selling, general and administrative | 18,426 | 17,855 | — | $ 8,910 | 45,191 |
| Provision for uncollectible accounts receivable | 4,415 | 16 | — | — | 4,431 |
| Legal | 387 | 726 | — | 2,597 | 3,710 |
| Total operating expenses | 54,910 | 46,518 | 2,022 | 11,507 | 114,957 |
| Operating (loss) income | (2,148) | 2,749 | (2,022) | (11,507) | (12,928) |
| Other income (expense) | | | | | |
| Interest | (5) | 2 | — | 14 | 11 |
| Other | 30 | (3) | — | 18 | 45 |
| Foreign exchange gain | — | 49 | — | — | 49 |
| (Loss) income before income taxes | $ (2,123) | $ 2,797 | $ (2,022) | $ (11,475) | $ (12,823) |
| Depreciation and amortization included above | $ 1,012 | $ 3,282 | $ 47 | $ 128 | $ 4,469 |
| Share-based compensation included in above: | | | | | |
| Cost of clinical laboratory services | $ 10 | — | $ — | — | $ 10 |
| Research and development | — | $ 14 | — | — | 14 |
| Selling, general and administrative and legal | 61 | 84 | — | $ 880 | 1,025 |
| Total | 71 | 98 | $ — | $ 880 | $ 1,049 |
| Capital expenditures | $ 834 | $ 389 | — | — | $ 1,223 |

(Dollars in thousands except share data)

Geographic financial information is as follows:

| **Net sales to unaffiliated customers:** | **2013** | **2012** | **2011** |
|---|---|---|---|
| United States | $ 80,559 | $ 87,776 | $ 85,691 |
| Switzerland | 5,499 | 6,802 | 8,508 |
| United Kingdom | 2,324 | 2,728 | 2,825 |
| Other international countries | 5,325 | 5,777 | 5,005 |
| Total | $ 93,707 | $ 103,083 | $ 102,029 |

| **Long-lived assets at July 31,** | **2013** | **2012** | **2011** |
|---|---|---|---|
| United States | $ 23,136 | $ 25,081 | $ 44,028 |
| Switzerland | 1,984 | 2,223 | 8,958 |
| United Kingdom | 491 | 618 | 2,857 |
| Other international countries | 401 | 426 | 1,850 |
| Total | $ 26,012 | $ 28,348 | $ 57,693 |

The Company's reportable segments are determined based on the services they perform, the products they sell, and the royalties and license fee income they earn, not on the geographic area in which they operate. The Company's Clinical Labs segment operates 100% in the United States with all revenue derived there. The Life Sciences segment earns product revenue both in the United States and foreign countries and royalty and license fee income in the United States. The following is a summary of the Life Sciences segment revenues attributable to customers located in the United States and foreign countries:

| | **2013** | **2012** | **2011** |
|---|---|---|---|
| United States | $ 24,669 | $ 28,372 | $ 32,928 |
| Foreign countries | 13,149 | 15,308 | 16,339 |
| | $ 37,818 | $ 43,680 | $ 49,267 |

**Note 16 – Summary of Selected Quarterly Financial Data (unaudited)**

The following table contains statement of operations information for each quarter of the years ended July 31, 2013 and 2012. The Company believes that the following information reflects all normal recurring adjustments necessary for a fair presentation of the information for the periods presented. The operating results for any quarter are not necessarily indicative of results for any future period.

Unaudited quarterly financial data for fiscal 2013 and 2012 is summarized as follows:

| | **Quarter Ended** | | | |
|---|---|---|---|---|
| **Fiscal 2013** | **October 31, 2012** | **January 31, 2013** | **April 30, 2013** | **July 31, 2013** |
| Total revenues | $ 25,630 | $ 22,210 | $ 22,598 | $ 23,269 |
| Gross profit | 11,736 | 8,642 | 9,048 | 9,446 |
| Loss before income taxes | (3,755) | (5,854) | (5,808) | (3,532) |
| Net loss | (3,691) | (5,674) | (5,770) | (3,102) |
| Basic and diluted loss per common share | $ (0.09) | $ (0.14) | $ (0.15) | $ (0.08) |

| | **Quarter Ended** | | | |
|---|---|---|---|---|
| **Fiscal 2012** | **October 31, 2011** | **January 31, 2012** | **April 30, 2012** | **July 31, 2012** |
| Total revenues | $ 25,753 | $ 24,973 | $ 25,949 | $ 26,408 |
| Gross profit | 11,802 | 11,579 | 12,056 | 11,673 |
| Loss before income taxes | (4,326) | (4,076) | (3,445) | (29,074) |
| Net loss | (4,494) | (4,221) | (3,411) | (27,143) |
| Basic and diluted loss per common share | $ (0.12) | $ (0.11) | $ (0.09) | $ (0.69) |

**ENZO BIOCHEM, INC**
**SCHEDULE II**
**VALUATION AND QUALIFYING ACCOUNTS**
**Years ended July 31, 2013, 2012 and 2011**
**(in thousands)**

| Year ended July 31, | Description | Balance at Beginning of period | Charged to costs and expenses | Charged to other accounts | Deductions | Balance at end of period |
|---|---|---|---|---|---|---|
| 2013 | Allowance for doubtful accounts receivable | 3,273 | 4,496 | | 5,062(1) | 2,707 |
| 2012 | Allowance for doubtful accounts receivable | 3,488 | 5,104 | | 5,319(1) | 3,273 |
| 2011 | Allowance for doubtful accounts receivable | 2,839 | 4,431 | | 3,782(1) | 3,488 |
| 2013 | Deferred tax valuation allowance | 41,261 | 6,362 | | | 47,623 |
| 2012 | Deferred tax valuation allowance | 32,920 | 8,341 | | | 41,261 |
| 2011 | Deferred tax valuation allowance | 28,901 | 4,019 | | | 32,920 |

(1) Write-off of uncollectible accounts receivable.

**Exhibit 10(m)**

**REVOLVING LOAN AND SECURITY AGREEMENT**

dated as of June 7, 2013

among

**ENZO BIOCHEM, INC.**
**ENZO CLINICAL LABS, INC.**
**ENZO LIFE SCIENCES, INC.**
**AXXORA, LLC**
**ENZO REALTY LLC**
and each other Person joined hereto from time to time as a Borrower,

**ENZO THERAPEUTICS, INC.**
as a Guarantor,

and

**HEALTHCARE FINANCE GROUP, LLC**,
as the Lender

**TABLE OF CONTENTS**

EXHIBITS



SCHEDULES

**REVOLVING LOAN AND SECURITY AGREEMENT**

**REVOLVING LOAN AND SECURITY AGREEMENT** (the "**Agreement**") dated as of **June 7, 2013**, between **ENZO BIOCHEM, INC.**, a New York corporation ("**Enzo**"), **ENZO CLINICAL LABS, INC.,** a New York corporation ("**Enzo Clinical Labs**"), **ENZO LIFE SCIENCES, INC.**, a New York corporation ("**Enzo Life Sciences**"), **AXXORA, LLC**, a Delaware limited liability company ("**Axxora**"), **ENZO REALTY LLC**, a New York limited liability company ("**Enzo Realty**", together with Enzo, Enzo Clinical Labs, Enzo Life Sciences, Axxora, Enzo Realty and each other Person joined hereto from time to time as a borrower, collectively, the "**Borrowers**" and each a "**Borrower**"), **ENZO THERAPEUTICS, INC.**, a New York corporation, as a Guarantor ("**Enzo Therapeutics**", together with Borrowers, the "**Loan Parties**" and each a "**Loan Party**"), and **HEALTHCARE FINANCE GROUP, LLC**, a Delaware limited liability company ("**HFG**"), in its capacity as a lender (together with its successors and permitted assigns in that capacity, the "**Lender**").

The Borrowers wish to borrow funds from the Lender secured by certain assets of the Borrowers, and the Lender is prepared to make such loans to the Borrowers, on the terms and subject to the conditions set forth herein.

Accordingly, the parties agree as follows:

## ARTICLE 1
## DEFINITIONS

1.1 **Definitions**. As used in this Agreement (including the Exhibits and Schedules attached hereto), the following definitions apply:

"**Accrued Amounts**" means, as at any date, the aggregate amount of accrued or incurred but unpaid or unreimbursed (whether or not due and payable) (1) interest on the Revolving Loan, (2) Non-Utilization Fee, (3) Collateral Tracking Fee, (4) all other fees set forth in Section 2.2, and (5) legal and due diligence costs and expenses incurred by the Lender in accordance with this Agreement.

"**Adjusted Borrowing Limit**" means an amount equal to the result of (1) the Borrowing Limit, minus (2) Accrued Amounts, minus (3) any additional reserves that the Lender might establish and maintain from time to time in the Lender's Permitted Discretion.

"**Adjusted Expected Net Value**" means, with respect to any Eligible Receivable, an amount equal to the Expected Net Value, minus any adjustments and reserves made or established and maintained from time to time by the Lender in the Lender's Permitted Discretion (including the Medicare/Medicaid Reserve, reserves for deferred revenue, unapplied cash, and credit balances and other reserves). The Adjusted Expected Net Value of Eligible Receivables of the Borrowers as of any time is indicated on line VIII of the applicable Borrowing Base Report.

"**Advance Rate Percentage**" means 90%.

"**Affiliate**" means, as to any Person, any other Person that, directly or indirectly, is in control of, is controlled by or is under common control with such Person or is a director or officer of such Person. For the purposes of this definition, "control", when used with respect to any specified Person, means the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise.

**"Affiliate Assignee"** has the meaning set forth in Section 12.3.

"**Authorized Officer**" means the chief financial officer or senior vice president of finance of Enzo and each other Person designated from time to time by the chief financial officer or senior vice president of finance of Enzo in a notice to the Lender, which designation shall continue in force and effect until terminated in a notice to the Lender from the chief financial officer or senior vice president of finance of Enzo.

"**Borrowers**" has the meaning set forth in the preamble to this Agreement.

"**Borrower Account**" means initially account #4977160233 of the Borrowers at Citibank, NA, ABA #021-000-089, Reference: Loan Proceeds, or such other bank account designated by the Borrower Representative by notice to the Lender from time to time.

"**Borrower Lockbox**" means each lockbox set forth on Schedule III hereto, established to receive checks and EOBs with respect to Receivables payable by Governmental Entities.

"**Borrower Lockbox Account**" means each account set forth on Schedule III hereto in the name of a Borrower and associated with a Borrower Lockbox established and controlled by that Borrower to deposit collections received in respect of the Receivables, including any such collections received in the Borrower Lockbox and any such collections received by wire transfer directly from Governmental Entities, all as more fully set forth in the applicable Depositary Agreement.

"**Borrower Representative**" means Enzo in its capacity as Borrower Representative pursuant to the provisions of Section 12.20, or any successor Borrower Representative selected by Borrowers and approved by the Lender.

"**Borrowing Base**" means, as of any time, an amount equal to the result of (1) the Adjusted Expected Net Value of Eligible Receivables of the Borrowers at such time (as set forth on line VIII of the applicable Borrowing Base Report), *multiplied by* (2) the Advance Rate Percentage.

"**Borrowing Base Report**" means a certificate (which may be sent by Transmission), signed by an Authorized Officer, substantially in the form set forth in Exhibit II hereto, which shall provide the most recently available information with respect to the Eligible Receivables of the Borrowers that is set forth in the aged accounts receivable trial balance and books and records of the Borrowers, in form and substance satisfactory to the Lender.

"**Borrowing Limit**" means, as of any date, the lesser of (1) the Revolving Commitment and (2) the Borrowing Base as of that date.

"**Business Associate Agreement**" means the business associate agreement, dated the date hereof, between the Lender, for itself and each other "Business Associate" (as defined therein), and each "Covered Entity" (as defined therein), in form and substance satisfactory to the Lender, as amended, restated, supplemented or modified from time to time.

"**Business Day**" means any day on which banks are not authorized or required to close in New York City, New York.

"**Capital Expenditures**" means, with respect to any Person for any period, the aggregate of all expenditures (including, without limitation, obligations created under Capital Leases in the year in which

created) of such Person in respect of the purchase or other acquisition of fixed or capital assets, as determined in accordance with GAAP.

"**Capital Lease**" means, as applied to any Person, any lease of any Property (whether real, personal or mixed) by that Person as lessee, the obligations of which are required, in accordance with GAAP, to be capitalized on the balance sheet of that Person.

"**Cash Burn**" means for any period or as of any date, in each case with respect to the Loan Parties and their Subsidiaries on a consolidated basis, EBITDAminus the sum of the following items to the extent actually paid in cash during such period, determined in each case in accordance with GAAP: (i) the greater of (x) scheduled principal payments of long term Debt and Capital Leases to be made during such period and (y) actual principal payments of long term Debt and Capital Leases made during such period, (ii) Capital Expenditures made during such period (to the extent not funded by permitted purchase money loans or Capital Leases),(iii) interest expense during such period (including that portion attributable to Capital Leases in accordance with GAAP and capitalized interest), (iv) taxes during such period based on the Loan Parties' and their Subsidiaries income, (v) the aggregate amount of Distributions, and other advances, and loans to officers, Affiliates, and shareholders made during such period, and (vi) any required minimum pension plan payments.

"**Change of Control**" means any of the following: (1) Enzo shall fail to own or control exclusively 100% of the voting power of the outstanding securities of each other Borrower ordinarily having the right to vote in the election of directors, (2) the sale, lease or transfer of all or substantially all of the assets of any Borrower to any Person (including without limitation any "person" as such term is defined in Section 13(d)(3) of the Exchange Act) other than another Borrower; (3) the liquidation or dissolution of (or the adoption of a plan of liquidation by) any Borrower; (4) the acquisition by any Person (including without limitation any "person" as such term is defined in Section 13(d)(3) of the Exchange Act) of more than 30% of the voting stock of Enzo by way of merger or consolidation or otherwise; (5) any change in the composition of the board of directors (or equivalent governing body) of Enzo such that a majority of the members of such board or body were not members thereof on the Closing Date or nominated or elected by the affirmative vote of a majority of the members of such board or body where such majority members were also members thereof on the Closing Date; or (6) any two of Andrew Crescenzo, Elazar Rabbani or Barry Weiner ceases (whether simultaneously or at different times) to act as Senior Vice President of Finance, CEO and CFO, respectively, of Enzo, unless a replacement Senior Vice President of Finance, CEO or CFO, as applicable, satisfactory to Lender in its Permitted Discretion is selected within ninety (90) days of such cessation and Enzo is diligently pursuing a replacement for the applicable officer during such time.

"**Claims**" has the meaning set forth in Section 2.5(b).

"**Closing Date**" means the date that all of the conditions set forth in Section 6.1 have been satisfied.

"**CMS**" means the Centers for Medicare and Medicaid Services of the United States Department of Health and Human Services.

"**Collateral**" has the meaning set forth in Section 3.1.

"**Collateral Tracking Fee**" has the meaning set forth in Section 2.2(d).

"**Collection Account**" means the Lender's account maintained at Citibank, N.A., ABA #021-000-089, DDA Account #36263566, Ref: A&T SF c/o HFG Healthco-4 LLC—Collection Account, or such other bank account designated by the Lender from time to time.

"**Collections**" means all cash collections, wire transfers, electronic funds transfers and other cash proceeds of Receivables deposited in or transferred to the Collection Account. For purposes of the calculation of Net Availability (as set forth on line XX of the applicable Borrowing Base Report) and the Non-Utilization Fee hereunder, Collections will be applied as of the date of receipt in the Collection Account. For all other purposes, Collections shall be applied hereunder only following a 3 Business Day clearance period applied thereto.

"**Contracts**" means, collectively, all rights of each Loan Party under all leases, contracts and agreements to which such Loan Party is now or hereafter a party, including all rights of such Loan Party to receive moneys due or to become due thereunder or pursuant thereto, but excluding (i) rights under (but not excluding proceeds of) any lease, contract or agreement (including, without limitation, any license) that by the terms thereof, or under applicable law, cannot be assigned or a security interest granted therein in the manner contemplated by this Agreement unless consent from the relevant party or parties has been obtained and under the terms of which lease, contract or agreement any such assignment or grant of a security interest therein in the absence of such consent would, or could, result in the termination thereof, but only to the extent that (1) those rights are subject to such contractual or legal restriction and (2) that restriction is not, or could not be, rendered ineffective pursuant to the UCC of any relevant jurisdiction or any other applicable law (including the United States Bankruptcy Code) or principles of equity, and (ii) rights under (but not excluding proceeds of) any intellectual property license.

"**Compliance Certificate**" means a certificate of the Chief Financial Officer, Senior Vice President of Finance, or another authorized officer of the Borrower Representative acceptable to the Lender in the Lender's Permitted Discretion, in the form attached as Exhibit III hereto, that (1) states as of the date of such certificate (A) that no Default or Event of Default has occurred and is continuing (or if any Default or Event of Default then exists, states the nature thereof and describes the steps being taken to address such Default or Event of Default); and (B) that all representations and warranties set forth in this Agreement are true and correct in all material respects (except any representation or warranty that expressly indicates that it is being made only as of a specific date, in which case such representation or warranty shall be true and correct on and as of such date); and (2) details compliance for the applicable fiscal period with all the financial covenants contained in Article 10 of this Agreement (and attaches a schedule showing the calculations thereof).

"**Control Agreement**" means each deposit account control agreement in favor of the Lender relating to a deposit account of a Borrower, in form and substance satisfactory to the Lender.

"**Credit and Collection Policy**" means those account receivable credit and collection policies and practices of the Borrowers as in effect on the date of this Agreement and set forth in Schedule IV hereto, as modified from time to time with the consent of the Lender.

"**Debt**" of any Person means (without duplication): (1) all obligations of such Person for borrowed money; (2) all obligations of such Person evidenced by bonds, notes, debentures, or other similar instruments or upon which interest payments are customarily made; (3) all obligations of such Person to pay the deferred purchase price of Property or services (other than trade payables and other accounts payable (i) among Loan Parties and their Subsidiaries, or (ii) incurred in the ordinary course of such Person's business and not outstanding for more than 120 days after the date such payable was due); (4) all Debt of others directly or indirectly Guaranteed (which term shall not include endorsements in the ordinary course of business) by such Person; (5) all obligations created under Capital Leases of such

Person; (6) all obligations secured by a Lien on any Property owned by such Person, whether or not the obligations secured thereby have been assumed by such Person or are non-recourse to the credit of such Person (but only to the extent of the value of such Property); (7) the aggregate unfunded pension liabilities pursuant to such Person's pension plans; and (8) without duplication of any amounts set forth in clause (7), the minimum assumed annual funding obligation pursuant to such Person's pension plans.

"**Default**" means an event, act or condition which with the giving of notice or the lapse of time, or both, would constitute an Event of Default.

"**Depositary Agreement**" means each Control Agreement, dated the date hereof, among the Borrowers, the Lender, and a Lockbox Bank, in form and substance satisfactory to the Lender.

"**Distribution**" means any dividend payment or other distribution of assets, properties, cash, rights, obligations or securities on account of any Equity Interests in any Loan Party, any return of capital to any Loan Party's equity holders as such, or any action to purchase, retire, defease, redeem or otherwise acquire for value or make any payment in respect of any Equity Interests in any Loan Party or any warrants, rights or options to acquire any such interests, now or hereafter outstanding.

"**Early Termination Fee**" means, with respect to any termination, in whole or in part, of a Revolving Commitment, an amount equal to a percentage of such Revolving Commitment (or portion of such Revolving Commitment) being terminated, as set forth in the table below:

| Date of Termination | Percentage |
|---|---|
| Within 12 Months of the Closing Date | 2.00% |
| Within 24 months of, but more than 12 months after the Closing Date | 1.50% |
| More than 24 months after the Closing Date | 1.00% |

"**EBITDA**" for any period means, with respect to the Loan Parties and their Subsidiaries on a consolidated basis, the sum of (1) net income (or net loss) of such Person (calculated before extraordinary items) during such period plus (2) the result of the following, in each case (unless otherwise indicated) to the extent deducted in determining such net income (or net loss): (A) interest expense (including that portion attributable to Capital Leases in accordance with GAAP and capitalized interest) during such period; plus (B) income taxes accruing, paid or payable during such period; plus (C) depreciation and amortization expense during such period; plus (D) unrealized losses on investments during such period; plus (E) non cash impairment charges for goodwill or general intangibles during such period, plus (F) losses on foreign exchange currency swaps or any other non-cash foreign exchange charges during such period, plus (G) stock based compensation expenses, including expenses in connection with matching contributions to 401(k) plans, during such period, plus (H) non-cash and/or non-recurring charges and expenses during such period in an amount not to exceed $400,000 in any trailing twelve month period, minus (I) gains from asset dispositions during such period outside of the normal course of business; minus (J) unrealized gains on investments during such period; minus (K) gains on foreign exchange currency swaps during such period; in each case determined in each case in accordance with GAAP. Notwithstanding anything to the contrary herein, "EBITDA" shall not include any proceeds of the Life Technologies Commercial Tort Claim.

"**Eligibility Criteria**" means the criteria and basis for determining whether a Receivable will be deemed by the Lender to qualify as an Eligible Receivable, all as set forth in Exhibit I hereto, as such Eligibility Criteria may be modified from time to time as determined by the Lender in its good faith discretion upon notice to the Borrower Representative.

"**Eligible Receivables**" means Receivables of Enzo Clinical Labs, Enzo Life Sciences or Axxora that satisfy the Eligibility Criteria, as determined by the Lender in the Lender's Permitted Discretion. Notwithstanding anything to the contrary in the Eligibility Criteria or in this Agreement, no Receivables of Enzo Life Sciences or Axxora shall constitute Eligible Receivables unless and until (a) the Borrower Representative provides ten days prior written notice to Lender of its desire to include Receivables of Enzo Life Sciences and Axxora as Eligible Receivables, (b) a field examination of such Receivables has been performed by Lender or an agent of Lender within ninety (90) days of any such Receivables being deemed "Eligible Receivables" or being included in the Borrowing Base, (c) no Default or Event of Default is continuing at the time Lender receives the notice set forth in clause (a) above, (d) the Obligors of such Receivables have been directed to remit payment to a deposit account subject to a Control Agreement in accordance with Section 4.1(b) hereof, (e) Lender has taken the actions necessary to (i) prohibit Borrowers from withdrawing or directing the disposition of funds in the deposit account referenced in clause (d), and (ii) commence automatic wires from such deposit account referenced in clause (d) to the Collection Account, and (f) such Receivables otherwise satisfy the Eligibility Criteria.

"**Employee Benefit Plan**" means any employee benefit plan within the meaning of Section 3(3) of ERISA (including a Plan) maintained by any Borrower or any of their respective ERISA Affiliates or to which any of them is required to contribute.

**"Environmental Laws"** means any and all applicable federal, state and local laws, statutes, ordinances, rules, regulations, permits, licenses, approvals, interpretations and orders of courts or Governmental Entity, relating to the protection of human health from exposure to hazardous materials or the environment, including, but not limited to, the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. § 9601 et seq.), the Hazardous Material Transportation Act (49 U.S.C. § 331 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. § 6901 et seq.), the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), the Clean Air Act (42 U.S.C. § 7401 et seq.), the Toxic Substances Control Act (15 U.S.C. § 2601 et seq.), the Safe Drinking Water Act (42 U.S.C. § 300, et seq.), the Environmental Protection Agency's regulations relating to underground storage tanks (40 C.F.R. Parts 280 and 281), and the Occupational Safety and Health Act (29 U.S.C. § 651 et seq.), and the rules and regulations thereunder, each as amended or supplemented from time to time. Environmental Laws include but are not limited to requirements pertaining to the manufacture, processing, distribution, use, treatment, storage, disposal, transportation, handling, reporting, licensing, permitting, investigation or remediation of hazardous materials.

"**EOB**" means the explanation of benefit or remittance advice from an Obligor that identifies the services rendered on account of the Receivable specified therein.

"**Equity Interest**" means any share, interest or other equivalent of capital stock of any Person, whether voting or non-voting and whether common or preferred (including any membership interest in a not-for-profit entity), all options, warrants and other rights to acquire, and all securities convertible into, any of the foregoing, all rights to receive interest, income, dividends, distributions, returns of capital and other amounts (whether in cash, securities, property, or a combination thereof), and including, without limitation, all rights to receive amounts due and to become due under or in respect of any investment agreement or upon the termination thereof, and all other rights, powers, privileges, interests, claims and other property in any manner arising out of or relating to any of the foregoing.

"**ERISA**" means the Employee Retirement Income Security Act of 1974, as amended, and the guidance issued thereunder.

"**ERISA Affiliate**" means any trade or business (whether or not incorporated) that, together with any Loan Party, is treated as a single employer under Section 414(b), (c), (m) or (o) of the IRC or Section 4001 of ERISA.

"**ERISA Event**" means (1) a Reportable Event; (2) the withdrawal of any Borrower or any ERISA Affiliate from a Plan subject to Section 4063 of ERISA during a plan year in which such entity was a "substantial employer" (as defined in Section 4001(a)(2) of ERISA) or a cessation of operations that is treated as such a withdrawal under Section 4062(e) of ERISA; (3) the complete or partial withdrawal of any Borrower or any ERISA Affiliate from any Multiemployer Plan; (4) a notice of reorganization or insolvency of a Multiemployer Plan; (5) the filing of a notice of intent to terminate a Plan or the treatment of a Plan amendment as a termination under Section 4041 or 4041A of ERISA; (6) the institution by the PBGC of proceedings to terminate a Plan; (7) the failure to make any material required contribution to a Plan or Multiemployer Plan without regard to waivers or variances; (8) the imposition of a lien under Section 412 of the IRC or Section 302 of ERISA on any Borrower or any ERISA Affiliate; (9) the existence with respect to any Plan of an "accumulated funding deficiency" (as defined in Section 412 of the IRC or Section 302 of ERISA), whether or not waived; (10) the determination that any Plan is considered an at-risk plan or a plan in endangered or critical status within the meaning of Section 430, 431 or 432 of the IRC or Section 303, 304 or 305 of ERISA; (11) any event or condition that might reasonably be expected to constitute grounds under Section 4042 of ERISA for the termination of, or the appointment of a trustee to administer, any Plan or Multiemployer Plan; or (12) the imposition of any liability under Title IV of ERISA, other than for PBGC premiums due but not delinquent under Section 4007 of ERISA on any Borrower or any ERISA Affiliate.

"**Event of Default**" has the meaning set forth in Section 11.1.

"**Exchange Act**" means The Securities Exchange Act of 1934, as amended, and as it may be further amended from time to time.

"**Excluded Claims**" has the meaning set forth in Section 2.5(b).

"**Expected Net Value**" means, with respect to any Eligible Receivable, the gross unpaid amount of such Receivable on the date of creation thereof, times the applicable Net Value Factor.

"**Farmingdale Property**" shall mean the real property located at 10 Executive Blvd., Farmingdale, NY 11735 and owned by Enzo Realty.

"**Foreign Deposit Account**" means any deposit account of any Borrower (a) maintained with a bank or other financial institution whose jurisdiction (as determined in accordance with Section 9-304(b) of the UCC as in effect in the State of New York) is not within the United States and (b) that is not located in the United States.

"**Full Payment**" or "**Fully Paid**" means, with respect to any Lender Debt, the full cash payment thereof, including any interest, fees and other charges accruing during (or that would have accrued but for the commencement of) any bankruptcy or other insolvency proceeding (whether or not allowed or allowable in such proceeding). No Lender Debt will be deemed to have been paid in full until all Lender Debt (other than unasserted contingent indemnification obligations) has been fully paid in cash and all commitments of the Lender under this Agreement have expired or been expressly terminated in writing.

"**Funding Date**" means any Business Day on which a Revolving Advance is made at the request of the Borrower Representative in accordance with provisions of this Agreement.

"**GAAP**" means generally accepted accounting principles in the United States of America.

"**Governmental Entity**" means the United States of America, any state thereof, any political subdivision of a state thereof and any agency or instrumentality of the United States of America or any state or political subdivision thereof and any entity exercising executive, legislative, judicial, regulatory, or administrative functions of or pertaining to government. Payments from Governmental Entities will be deemed to include payments governed under the Social Security Act (42 U.S.C. §§ 1395 et seq.), including payments under Medicare, Medicaid and TRICARE/CHAMPUS, and payments administered or regulated by CMS.

"**Guarantors**" means Enzo Therapeutics and any Person who from time to time provides a Guaranty of, or otherwise becomes obligated with respect to, any of the Lender Debt.

"**Guaranty**" by any Person means any obligation, contingent or otherwise, of such Person directly or indirectly guaranteeing any Debt or other obligation of any other Person and, without limiting the generality of the foregoing, any obligation, direct or indirect, contingent or otherwise, of such Person (1) to purchase or pay (or advance or supply funds for the purchase or payment of) such Debt or other obligation (whether arising by virtue of partnership arrangements, by agreement to keep-well, to purchase assets, goods, securities or services, or to take-or-pay), or (2) entered into for the purpose of assuring in any other manner the obligee of such Debt or other obligation of the payment thereof or to protect the obligee of such Debt or other obligation of the payment thereof or to protect the obligee against loss in respect thereof (in whole or in part), provided that the term Guaranty shall not include endorsements for collection or deposit in the ordinary course of business. The term "Guaranty" used as a verb has a corresponding meaning.

"**Healthcare Laws**" means all applicable statutes, laws, ordinances, rules, and regulations of any Governmental Entity with respect to regulatory matters primarily relating to patient healthcare, healthcare providers, and healthcare services (including, without limitation: Section 1128B(b) of the Social Security Act, as amended, 42 U.S.C. § 1320a 7(b) (Criminal Penalties Involving Medicare or State Health Care Programs), commonly referred to as the "Federal Anti-Kickback Statute;" HIPAA (as defined in the Business Associate Agreement); and the Social Security Act, as amended, Section 1877, 42 U.S.C. § 1395nn (Prohibition Against Certain Referrals), commonly referred to as "Stark Statute").

"**HFG**" has the meaning set forth in the preamble to this Agreement.

"**HFG Web Portal**" has the meaning set forth in Section 12.16.

"**HFG Web Portal Communications**" means, collectively, any communication, information, document, or other material provided through the HFG Web Portal.

"**Indemnified Party**" has the meaning set forth in Section 2.5(b).

"**Initial Funding Date**" means the date of funding of the initial Revolving Advance.

"**Initial Term**" has the meaning set forth in Section 12.7.

"**Insolvency Proceeding**" means any case or proceeding commenced by or against a Person under any state, federal or foreign law for, or any agreement of such Person to, (a) the entry of an order for relief under the United States Bankruptcy Code, or any other insolvency, debtor relief or debt adjustment law; (b) the appointment of a receiver, trustee, liquidator, administrator, conservator or other

custodian for such Person or any part of its Property; or (c) an assignment or trust mortgage for the benefit of creditors.

"**Insurer**" means any Person (other than a Governmental Entity) which in the ordinary course of its business or activities agrees to pay for healthcare goods and services received by individuals, including commercial insurance companies, nonprofit insurance companies (such as the Blue Cross, Blue Shield entities), employers or unions which self insure for employee or member health insurance, prepaid health care organizations, preferred provider organizations, health maintenance organizations, commercial hospitals, physicians groups or any other similar Person. "Insurer" includes insurance companies issuing health, personal injury, workers' compensation or other types of insurance but does not include any individual guarantor.

"**Interest Period**" means each one-month period (or shorter period ending on the Maturity Date) provided, that the initial Interest Period shall commence on the Initial Funding Date and shall end on the last calendar day of the month in which the Initial Funding Date occurred.

"**IRC**" means the Internal Revenue Code of 1986, as amended (or any successor statute thereto) and the guidance thereunder.

"**Last Service Date**" means, with respect to any Eligible Receivable, the date set forth on the related invoice or statement as the most recent date on which services, goods or merchandise were provided or shipped by the applicable Borrower to the related patient or customer.

"**Lender**" means HFG and each of its successors and permitted assigns in that capacity.

"**Lender Debt**" means and includes any and all amounts due, whether now existing or hereafter arising, under this Agreement or any other Loan Document in respect of the Revolving Loan, including, without limitation, any and all principal, interest, penalties, fees, charges, premiums, indemnities and costs owed or owing to the Lender by the Borrowers, or any of them, or any Guarantor or Affiliate of any Borrower (including, without limitation, the Early Termination Fee), in each instance, whether absolute or contingent, direct or indirect, secured or unsecured, due or not due, arising by operation of law or otherwise, and all interest and other charges thereon, including, without limitation, post-petition interest whether or not such interest is an allowable claim in a bankruptcy proceeding.

"**Lender Default**" shall mean the occurrence of all of the following: (a) Lender acknowledges that it is unable to comply with its funding obligations under this Agreement on the applicable Funding Date because it has generally ceased making loans or advances to substantially all of the borrowers in its loan portfolio due to issues affecting Lender's ability to access its funding sources or the capital markets; (b) Lender acknowledges that no Default or Event of Default has occurred and is continuing hereunder or would occur after giving effect to the making of the requested Revolving Advance; (c) Borrowers have satisfied all funding conditions set forth in Section 6.2 hereof; and (d) the sum of the requested Revolving Advance and the Outstanding Balance is less than or equal to the Adjusted Borrowing Limit.

"**Lender Group**" means (1) the Lender and (2) each of its agents and delegates identified from time to time to effectuate this Agreement.

"**Lender Lockbox**" means each lockbox whether held in the name of the Lender or any Borrower, located at the address set forth on Schedule III, to receive checks and EOBs with respect to Receivables payable by Insurers and other non-Governmental Entities.

"**Lender Lockbox Account**" means each account at a Lockbox Bank as set forth on Schedule III as associated with a Lender Lockbox and established by one or more of the Borrowers to deposit collections in respect of the Receivables, including any such collections received in any Lender Lockbox and any such collections received by wire transfer directly from Insurers and all other Non-Governmental Entities, all as more fully set forth in the applicable Depositary Agreement.

"**Liability Event**" means any event, fact, condition, or circumstance or series thereof (1) in or for which any Borrower becomes liable or otherwise responsible for any amount owed or owing to any Medicaid or Medicare program by a provider under common ownership with any Borrower or any provider owned by any Borrower pursuant to any applicable law, ordinance, rule, decree, order, or regulation of any Governmental Entity after the failure of any such provider to pay any such amount when owed or owing; (2) in which Medicaid or Medicare payments to any Borrower can be lawfully set off against payments to that or any other Borrower to satisfy any liability of or for any amounts owed or owing to any Medicaid or Medicare program by a provider under common ownership with any Borrower or any provider owned by any Borrower pursuant to any applicable law, ordinance, rule, decree, order, or regulation of any Governmental Entity; (3) in which any other payments from any Obligor other than a Governmental Entity to any Borrower can be lawfully set off against payments to that or any other Borrower to satisfy any liability of or for any amounts owed or owing to that Obligor by a provider under common ownership with any Borrower or any provider owned by any Borrower; or (4) any of the foregoing under clauses (1) and (2), in each case pursuant to statutory or regulatory provisions that are similar to any applicable law, ordinance, rule, decree, order, or regulation of any Governmental Entity referred to in clauses (1) and (2), or any successor provisions thereto.

"**LIBOR**" for any Interest Period, means a rate per annum equal to the greater of (1) 1.25% and (2) the rate per annum, determined by the Lender in accordance with its customary procedures, and utilizing such electronic or other quotation sources as it considers appropriate (rounded upwards, if necessary, to the next 1/16%), to be the rate at which Dollar deposits for a three month period (for delivery on the first day of an Interest Period) in the amount of $1,000,000 are offered to major banks in the London interbank market on or about 11:00 a.m. (London time) two (2) Business Days prior to the commencement of such Interest Period, which determination shall be conclusive in the absence of manifest error; provided, that so long as available, Lender will obtain such electronic quotation from the USD column on the Bloomberg Screen, code BBAM (Telerate Successor Page 3750) or such other code as may replace code BBAM in such service for the purposes of display of the interest rates in the London interbank market.

"**Lien**" means any lien, charge, deed of trust, mortgage, security interest, tax lien, pledge, hypothecation, assignment, preference, priority, other charge or encumbrance, or any other type of preferential arrangement of any kind or nature whatsoever by or with any Person (including, without limitation, any conditional sale or title retention agreement), whether arising by contract, operation of law, or otherwise.

"**Life Technologies Commercial Tort Claim**" shall mean the commercial tort claim of Enzo against, including the judgment entered against, Life Technologies, Inc. (f/k/a Applera Corp.) in the amount of $48.6 million awarded in *Enzo Biochem, Inc. et al. v. Applera Corp. and Tropix Inc.* No. 3:04cv929 (JBA) in the United States District Court for the District of Connecticut (New Haven).

"**Loan Documents**" means this Agreement, each promissory note (if any) evidencing the Revolving Loan, each Depositary Agreement, each Borrowing Base Report, each Monthly Report, each Control Agreement, each Pledge Agreement, each joinder delivered under Section 9.18, the Negative Pledge Agreement, and each other document or instrument now or hereafter executed or delivered to the Lender pursuant to or in connection herewith or therewith (including, without limitation, each other

agreement now existing or hereafter created providing collateral security for the payment or performance of any Lender Debt).

"**Loan Party**" means each Borrower and each Guarantor (other than an individual).

"**Lockbox**" refers to each Borrower Lockbox and each Lender Lockbox, as the context requires.

"**Lockbox Account**" refers to each Borrower Lockbox Account and each Lender Lockbox Account, as the context requires.

"**Lockbox Bank**" means the applicable bank set forth on Schedule III hereto.

"**Material Adverse Effect**" means (1) a material adverse effect on the business, Properties, capitalization, assets, liabilities, operations or condition (financial or other) of Borrowers taken as a whole; (2) the material impairment of the ability of any Borrower to perform its obligations under this Agreement or any of the other Loan Documents; (3) the imposition of any obligations on the Lender, compliance with which would materially impair Lender's ability to receive its contemplated economic benefits hereunder; (4) the material impairment of the validity or enforceability of, or the rights, remedies or benefits available to the Lender under, this Agreement or any other Loan Document; or (5) the material impairment of the validity, perfection or priority of any Lien granted in favor of the Lender pursuant to this Agreement or any other Loan Document.

"**Maturity Date**" means the earliest to occur of (1) the Scheduled Maturity Date, (2) the occurrence of an Event of Default described in clause (9) of Section 11.1, and (3) the declaration by the Lender of the Maturity Date in accordance with Section 11.2.

"**Maximum Permissible Rate**" has the meaning set forth in Section 2.6.

"**Medicaid**" means the medical assistance program established by Title XIX of the Social Security Act (42 U.S.C. § 1396 et seq.) and any statutes succeeding thereto.

"**Medicare**" means the health insurance program for the aged and disabled established by Title XVIII of the Social Security Act (42 U.S.C. § 1395 et seq.) and any statutes succeeding thereto.

**"Medicare/Medicaid Reserve"** means, as of any date of determination, an amount, which in the Lender's sole discretion, is equal to the sum of (1) the amount of retroactive settlements estimated to be due and owing to Governmental Entities and (2) without duplication, 100% of those amounts for which payment plans have been established with the appropriate Governmental Entity.

**"Minimum Balance"** means an amount equal to $2,000,000.

"**Misdirected Payment**" means any form of payment in respect of a Receivable made by an Obligor in a manner other than as provided in the Notice sent to such Obligor.

"**Monthly Report**" means a report to the Lender (sent by Transmission unless otherwise agreed by the Lender), certified as accurate by the Borrower Representative, containing the following information: (1) the information contained on Exhibit II for the prior month; (2) electronic download of the transaction files for the prior month; and (3) electronic download of the monthly aged final balance for the prior month.

"**Multiemployer Plan**" means any Employee Benefit Plan of the type described in Section 4001(a)(3) of ERISA to which any Borrower or any ERISA Affiliate makes or is obligated to make contributions or, during the preceding five plan years, has made or been obligated to make contributions.

"**Multiple Employer Plan**" means an Employee Benefit Plan that has two or more contributing sponsors (including any Borrower or any ERISA Affiliate) at least two of whom are not under common control, as such plan is described in Section 4063 or 4064 of ERISA.

"**Negative Pledge Agreement**" means, collectively, (i) that certain Negative Pledge Agreement dated as of the date hereof from the Borrowers to the Lender relating to intellectual property rights of Borrowers, and (ii) that certain Negative Pledge Agreement dated as of the date hereof from the Borrowers to the Lender relating to the Farmingdale Property, in each case, as the same may be amended, restated, supplemented or otherwise modified from time to time.

"**Net Value Factors**" means, initially, the percentages reflected in the initial Borrowing Base Report, as such percentages may be adjusted, upwards or downwards, in the sole discretion of the Lender, based on actual collection experience.

"**Non-Utilization Fee**" has the meaning set forth in Section 2.2(c).

"**Notice**" means a notice letter on the Borrowers' corporate letterhead to an Obligor, in form and substance satisfactory to the Lender.

"**Obligor**" means an Insurer, Governmental Entity or other Person, as applicable, who is responsible for the payment of all or any portion of a Receivable.

"**Other Taxes**" has the meaning set forth in Section 2.4(b).

"**Outstanding Balance**" means, as of any date of determination, the aggregate outstanding principal balance of the Revolving Loan (plus the amount of interest that is due and payable on the Revolving Loan that remains unpaid beyond the first Business Day of the month in which such interest was due).

"**PBGC**" means the Pension Benefit Guaranty Corporation.

"**Pension Act**" means the Pension Protection Act of 2006, as amended (or any successor statute thereto), and the guidance issued thereunder.

"**Pension Funding Rules**" means the rules of the IRC and ERISA regarding minimum required contributions (including any installment payment thereof) to Plans and set forth in, with respect to plan years ending prior to the effective date of the Pension Act Section 412 of the IRC and Section 302 of ERISA, each as in effect prior to the Pension Act and, thereafter, Sections 412, 430, 431, 432, and 436 of the IRC and Sections 302, 303, 304, and 305 of ERISA.

"**Permitted Assignee**" shall mean (i) any Person that is a lender hereunder immediately prior to giving effect to an assignment to such Person, (ii) any Affiliate or branch of any Lender party hereto, or (iii) any trust or special purpose funding vehicle, whether or not any lender hereunder maintains any interest in such trust or special purpose funding vehicle.

"**Permitted Debt**" means (1) unsecured Debt in an aggregate amount not to exceed $1,000,000 outstanding at any one time; (2) the other Debt set forth on Schedule V hereto, and the extension of maturity, refinancing or modification of the terms thereof, so long as (A) such extension, refinancing or modification is pursuant to terms that are not less favorable to the Loan Parties and their Subsidiaries and the Lender than the terms of the Debt being extended, refinanced or modified, and (B) after giving effect to such extension, refinancing or modification, the amount of such Debt is not greater than the amount of such Debt outstanding immediately prior to such extension, refinancing or modification plus accrued interest thereon and the fees incurred in connection with the extension, refinancing, or modification; (3) Debt incurred by any Loan Party pursuant to a facility that provides such Loan Party financing for equipment, inventory, real property or other asset purchases and other capital expenditures, but solely to the extent such Debt is in an amount, upon such terms and conditions, and subject to documentation in form and substance, satisfactory to the Lender in its Permitted Discretion; (4) the Lender Debt; and (5) Debt of any Loan Party to any Affiliate in an amount not to exceed $100,000 outstanding in the aggregate at any time and provided that such Debt is subordinated to the Lender Debt on terms and conditions, and subject to documentation in form and substance, satisfactory to Lender in its Permitted Discretion.

"**Permitted Discretion**" means the exercise of the Lender's reasonable credit judgment, as viewed from the perspective of an asset-based lender, in good faith and in accordance with customary business practices for comparable asset-based lending transactions.

"**Permitted Liens**" means any of the following, but in no event will any Lien against the Receivables or the related contracts, collections in respect of the Receivables, or proceeds thereof constitute or be deemed to be a Permitted Lien:

(1) Liens securing the Lender Debt and other Liens in existence on the date of this Agreement and set forth on Schedule II, but not the extension of coverage thereof to any other property or assets;

(2) Liens imposed by law such as Liens of carriers, warehousemen, mechanics, materialmen and landlords, and other similar Liens incurred in the ordinary course of business for sums not constituting borrowed money that are not overdue for a period of more than 30 days or that are being contested in good faith by appropriate proceedings promptly initiated and diligently conducted, and for which adequate reserves have been established in accordance with GAAP (if so required):

(3) Liens for taxes, assessments or other governmental charges or statutory obligations that (i) are not delinquent or remain payable without any penalty or that are being contested in good faith by appropriate proceedings and for which adequate reserves have been established in accordance with GAAP and (ii) the Borrowers have the financial ability to pay, with all penalties and interest, without resulting in a Material Adverse Effect;

(4) with respect to any real property occupied by any Borrower, all easements, rights of way, licenses and similar encumbrances on title that do not (i) secure obligations for the payment of money or (ii) materially impair the value of such property or the use of such Property for its intended purposes;

(5) Liens arising from the filing, for notice purposes only, of financing statements in respect of true leases; and

(6) Purchase money security interests and Liens (other than liens on Collateral) securing Debt described in clause (iii) of the definition of Permitted Debt provided such Liens do not encumber Collateral.

"**Person**" means an individual, partnership, corporation (including a business trust), limited liability company, joint stock company, trust, unincorporated association, joint venture or other entity, or a Governmental Entity.

"**Plan**" means any employee pension benefit plan (including a Multiemployer Plan and a Multiple Employer Plan) that is maintained or to which any Borrower or any ERISA Affiliate must contribute and is either covered by Title IV of ERISA or is subject to the minimum funding standards under Section 412 of the IRC or Section 302 of ERISA.

**"Pledge Agreements"** means, collectively, (1) the Pledge Agreement, dated as of the date hereof, between Enzo and the Lender, (2) the Pledge Agreement, dated as of the date hereof, between Enzo Life Sciences Holding Company, Inc. and the Lender, and (3) the Pledge Agreement, dated the date hereof, between Enzo Life Sciences U.S. Holding Corp and the Lender.

"**Prior Equity Raise Proceeds**" means, as of any date of determination, cash proceeds of equity contributions (in the form of common equity or other equity having terms acceptable to Lender in its Permitted Discretion) that (a) have been received by a Loan Party, (b) have not been spent, or earmarked to be spent for any obligation, by any Loan Party, (c) are not subject to any Lien or security interest (except in favor of Lender), (d) are deposited into a deposit account subject to a Control Agreement in favor of Lender, and (e) can reasonably be traced to an equity contribution described above.

"**Property**" means property of all kinds, movable, immovable, corporeal, incorporeal, real, personal or mixed, tangible or intangible (including, without limitation, all rights relating thereto), whether owned or acquired on or after the date of this Agreement.

"**Receivable Information**" means the information listed on Exhibit IV hereto (together with any other information relating to the Receivables provided by any Borrower to the Lender from time to time) as such Exhibit may be modified by the Lender in consultation with the Borrowers from time to time.

"**Receivables**" means all accounts, instruments, general intangibles and health-care-insurance receivables, all other obligations for the payment of money and goodwill, whether now existing or hereafter arising, including, without limitation, all payments due from any Receivables including those based on a cost report settlement or expected settlement, and all proceeds of any of the foregoing, in each case, including rights of payment arising out of the rendition of medical, surgical, diagnostic or other professional medical services or the sale of medical products by each Loan Party in the ordinary course of its business, including all third-party reimbursable portions or third-party directly payable portions of health-care-insurance receivables or general intangibles owing (or in the case of Unbilled Receivables, to be owing) by an Obligor, including all rights to reimbursement under any agreements with and payments from Obligors, patients or other Persons, together with all books, records, ledger cards, data processing records, computer software, and other property at any time used or useful in connection with, evidencing, embodying, referring to, or relating to any of the foregoing.

"**Records**" means all of the Loan Parties' present and future books of account of every kind or nature, service and management agreements, invoices, ledger cards, statements, correspondence, memoranda, credit files and other data relating to the Receivables and the other Collateral or any account debtor or Obligor, together with the tapes, disks, diskettes and other data and software storage media and

devices, file cabinets or containers in or on which the foregoing are stored (including any rights of the Loan Parties with respect to the foregoing maintained with or by any other Person).

"**Related Person**" means any incorporator, equityholder (or immediate family member of an equityholder), Affiliate (other than the Lender), agent, attorney, officer, director, member, manager, employee or partner of the Lender or its members or its equityholders.

"**Renewal Term**" has the meaning set forth in Section 12.7.

"**Reportable Event**" means any of the events set forth in Section 4043(c) of ERISA, other than events for which the 30-day notice period has been waived.

"**Revolving Advance**" has the meaning set forth in Section 2.1.

"**Revolving Commitment**" means the commitment of the Lender to make Revolving Advances up to the amount of $8,000,000, as such amount may be increased or decreased pursuant to the provisions of Sections 2.1(h) and 2.1(i).

"**Revolving Loan**" has the meaning set forth in Section 2.1.

"**Scheduled Maturity Date**" means December 7, 2016.

**"Subordinated Debt"** means any Debt subordinated in right of payment to the Lender Debt on terms acceptable to the Lender in the Lender's Permitted Discretion.

"**Subsidiary**" of any Person, means any corporation or entity of which at least a majority of the outstanding shares of stock or other ownership interests having by the terms thereof ordinary voting power to elect a majority of the board of directors (or Persons performing similar functions) of such corporation or entity (irrespective of whether or not at the time, in the case of a corporation, stock of any other class or classes of such corporation shall have or might have voting power by reason of the happening of any contingency) is at the time directly or indirectly owned or controlled by such Person.

"**Taxes**" has the meaning set forth in Section 2.4.

"**Term**" shall mean the Initial Term and any Renewal Terms.

"**Transmission**" means, upon establishment of a computer interface between the Borrowers and the Lender or an FTP site, in each case in accordance with the specifications established by the Lender, the transmission of Receivable Information through such computer interface or FTP site or e-mail communication to the Lender in a manner satisfactory to the Lender.

"**TRICARE/CHAMPUS**" means the Civilian Health and Medical Program of the Uniformed Service, a program of medical benefits covering former and active members of the uniformed services and certain of their dependents, financed and administered by the United States Departments of Defense, Health and Human Services and Transportation and established pursuant to 10 USC §§ 1071-1106, and all regulations promulgated thereunder including without limitation (1) all federal statutes (whether set forth in 10 USC §§ 1071-1106 or elsewhere) affecting TRICARE/CHAMPUS; and (2) all rules, regulations (including 32 CFR 199), manuals, orders and administrative, reimbursement, and other guidelines of all Governmental Entities (including, without limitation, the Department of Health and Human Services, the Department of Defense, the Department of Transportation, the Assistant Secretary of Defense (Health Affairs), and the Office of TRICARE/CHAMPUS, or any Person or entity succeeding to

the functions of any of the foregoing) promulgated pursuant to or in connection with any of the foregoing (whether or not having the force of law) in each case as may be amended, supplemented or otherwise modified from time to time.

"**UCC**" means the Uniform Commercial Code as in effect from time to time in the specified or applicable jurisdiction.

"**United States Bankruptcy Code**" means the Federal Bankruptcy Reform Act of 1978 (11 U.S.C. §101, et seq.), as amended and in effect from time to time and the regulations issued from time to time thereunder.

"**Withdrawal Liability**" means, with respect to the any Borrower and its U.S. ERISA Affiliates at any time, the aggregate liability incurred (whether or not assessed) with respect to all Multiemployer Plans pursuant to Section 4201 of ERISA and with respect to all increases in contributions required to be made pursuant to Section 4243 of ERISA.

1.2 **Other Terms; Rules of Construction**. All terms used in Article 9 of the UCC as in effect in the State of New York, and not specifically defined herein, are used herein as defined in such Article 9. Any of the terms defined herein may, unless the context otherwise requires, be used in the singular or the plural, depending on the reference. For avoidance of doubt, a Default or Event of Default will be deemed to exist and be continuing at all times during the period commencing on the date that such Default or Event of Default occurs to the date on which such Default or Event of Default is waived in writing pursuant to the terms of this Agreement or, in the case of a Default, is cured within the period of cure, if any, expressly provided for in this Agreement. Unless the context otherwise provides to the contrary, the term "month" means a calendar month. The terms "herein," "hereof," "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Section, paragraph, subdivision, or clause. Any pronoun used shall be deemed to cover all genders. In the computation of periods of time from a specified date to a later specified date, "from" means "from and including,", "through" means "through and including," and "to" and "until" each mean "to but excluding,". The terms "including" and "include" shall mean "including" and, for purposes of each Loan Document, the parties agree that the rule of *ejusdem generis* shall not be applicable to limit any provision. Section titles appear as a matter of convenience only and shall not affect the interpretation of any Loan Document. All references to (a) laws or statutes include all related rules, regulations, interpretations, amendments and successor provisions; (b) any document, instrument or agreement include any amendments, waivers and other modifications, extensions or renewals (to the extent permitted by the Loan Documents); (c) any Section or Article mean, unless the context otherwise requires, a Section or Article of this Agreement; (d) any Exhibits mean, unless the context otherwise requires, Exhibits attached hereto, and any Schedules mean, unless the context otherwise requires, the Schedules attached hereto, all of which are hereby incorporated by reference; and (e) unless otherwise specified, discretion of the Lender means the sole and absolute discretion of such Person. The Borrowers shall have the burden of establishing any alleged negligence, misconduct, or lack of good faith by the Lender under any Loan Documents. No provision of any Loan Documents shall be construed against any party by reason of such party having, or being deemed to have, drafted the provision. Whenever the phrase "to the best of the Borrowers' knowledge", or words of similar import are used in any Loan Documents, it means actual knowledge of an officer of the applicable Borrowers, or knowledge that an officer of the applicable Borrowers would have obtained if he or she had engaged in good faith and diligent performance of his or her duties, including reasonably specific inquiries of employees or agents and a good faith attempt to ascertain the matter to which such phrase relates.

1.3 **Accounting Terms**. All accounting terms not specifically defined herein shall be construed in accordance with GAAP. Defined terms and calculations in connection with the covenants

and other provisions of this Agreement, including Article 10, shall be based upon and utilize GAAP applied in a manner consistent with that used in preparing the financial statements referred to in Section 7.15. If at any time any change in GAAP would affect the computation of any financial ratio or requirement set forth in this Agreement, and the Borrower shall so request, the Lender and the Borrowers shall negotiate in good faith to amend such ratio or requirement to preserve the original intent thereof in light of such change in GAAP; provided that, until so amended, (i) such ratio or requirement shall continue to be computed in accordance with GAAP prior to such change therein and (ii) the Borrowers shall provide to the Lender financial statements and other documents required under this Agreement or as reasonably requested hereunder setting forth a reconciliation between calculations of such ratio or requirement made before and after giving effect to such change in GAAP.

## ARTICLE 2
## AMOUNTS AND TERMS OF THE REVOLVING LOAN

2.1 **Revolving Advances**. (a) The Lender agrees to lend to the Borrowers, on a joint and several basis, from time to time during the Term, subject to and upon the terms and conditions herein set forth, on any Funding Date, such amounts as in accordance with the terms hereof may be requested by the Borrowers from time to time (each such borrowing, a "**Revolving Advance**" and the aggregate outstanding principal balance of all Revolving Advances from time to time, the '**Revolving Loan**").

(b) The aggregate outstanding principal amount of Revolving Advances made by the Lender shall not at any time exceed the amount of the Revolving Commitment. The sum of the principal amount of the Revolving Loan outstanding at any time shall not exceed the Adjusted Borrowing Limit.

(c) Subject to the limitations herein (including, without limitation, the conditions to funding Revolving Advances set forth in Article 6 hereof), the Borrowers may borrow, repay (without premium or penalty, except as expressly set forth in this Agreement) and reborrow Revolving Advances under the Revolving Commitment. The Revolving Loan shall not exceed, and the Lender will not have any obligation to make any Revolving Advance which would result in the Revolving Loan being in excess of, the Adjusted Borrowing Limit. If at any time the Revolving Loan exceeds the Adjusted Borrowing Limit, the Borrowers shall immediately eliminate such excess by repaying the Revolving Loan in an amount equal to such excess.

(d) The Lender, at its option, may make any Revolving Advance by causing any domestic or foreign branch or Affiliate of the Lender to make such Revolving Advance; provided that any exercise of such option shall not affect the obligation of the Borrowers to repay such Revolving Advance in accordance with the terms of this Agreement.

(e) Whenever the Borrowers desire a Revolving Advance be made, the Borrowers shall, not later than 2:00 p.m. (New York City time) one Business Day prior to the proposed Funding Date of the Revolving Advance, provide the Lender irrevocable notice of that borrowing request, which notice may be given by telephone or other means acceptable to the Lender, in each case by an Authorized Officer. Each such notice must specify the amount of the requested Revolving Advance (which must not be less than $100,000) and the requested Funding Date. Each such notice must be confirmed promptly by delivery to the Lender of a Borrowing Base Report with the amount of the requested advance in line XXI of that Borrowing Base Report, which must be signed by an Authorized Officer. In the event that one or more payments in respect of any Lender Debt shall become due and payable, the Borrowers will be deemed to have made an irrevocable request for Revolving Advances in an aggregate amount equal to such payments, and the proceeds of such Revolving Advances shall be applied by the Lender directly to make such payments.

(f) The Lender shall make each Revolving Advance to be made by it hereunder on the proposed Funding Date thereof by wire transfer of immediately available funds to the Borrower Account.

(g) On the Maturity Date, the Revolving Commitment shall terminate automatically. Upon such termination, the Revolving Loan (together with all other Lender Debt) shall become, without further action by any Person, immediately due and payable together with all accrued interest thereon plus any fees, premiums, charges or costs provided for hereunder with respect thereto, and, if applicable, the Early Termination Fee.

(h) The Borrowers may request in writing to the Lender from time to time, but in no event on more than 4 occasions an increase in the Revolving Commitment of up to $12,000,000, but in no event in an amount less than $1,000,000 or an integral multiple thereof. The Lender may, in its sole discretion, either reject such request or, within a reasonable period following the Lender's receipt of such request, agree to increase the Revolving Commitment by an amount equal to or less than the requested increase. As a condition precedent to any increase, the Obligors shall deliver to the Lender such documentation, certificates or other instruments and items as may be reasonably requested in connection with such increase.

(i) The Borrowers may in addition to any reduction by application of the Collections in accordance with Section 5.2 on any Business Day reduce the outstanding principal amount of the Revolving Loan; provided, however, that the Borrowers shall provide the Lender with at least one week's prior notice to the extent such reduction shall be more than $2,000,000 of the then outstanding principal amount of the Revolving Loan.

(j) The Revolving Loan may but need not be evidenced by one or more promissory notes, but in no event will the manner in which the Revolving Loan is evidenced limit or otherwise affect the obligation of the Borrowers to repay the Revolving Loan or any other Lender Debt, and that obligation, howsoever evidenced, is and will remain a continuing obligation of the Borrowers under this Agreement. Each Revolving Advance and each payment by the Borrowers thereon will be evidenced by the register maintained by the Lender pursuant to Section 2.4(e).

2.2 **Interest and Fees**. (a) The Borrowers shall pay: (1) interest on the average daily Outstanding Balance of the Revolving Loan during the prior month on the first Business Day of each month, and (2) all accrued and unpaid interest on the Outstanding Balance of the Revolving Loan on the Maturity Date (whether by acceleration or otherwise), in each case, at an interest rate per annum equal to LIBOR plus 4.00%. If the average daily Outstanding Balance of the Revolving Loan during any month is less than the Minimum Balance, then the Borrowers shall pay to the Lender, on the earlier of the first Business Day of the following month and the Maturity Date, a fee in an amount equal to the interest rate per annum stated in the immediately preceding sentence multiplied by the amount by which the Minimum Balance exceeded the average daily Outstanding Balance of the Revolving Loan during that prior month.

(b) Notwithstanding anything to the contrary contained herein, at all times following the occurrence of any Default or Event of Default, without notice to the Borrowers, interest on the Revolving Loan shall accrue, at the Lender's discretion, at a rate per annum equal to 3.00% in excess of the rate then otherwise applicable to the Revolving Loan. Interest accrued pursuant to this Section 2.2(b) shall be payable on the earlier of (1) the next date for payment of interest pursuant to Section 2.2(a) above, as applicable, and (2) the date on which Lender makes demand therefor.

(c) The Borrowers shall pay to the Lender, in arrears, on the first Business Day of each month and the Maturity Date, a fee (the "**Non-Utilization Fee**") equal to 0.50% per annum on the

average amount, calculated on a daily basis, by which the Revolving Commitment exceeded the aggregate amount of Revolving Advances that were outstanding during the prior month.

(d) If this Agreement is extended beyond the Initial Term, the Borrowers shall pay to the Lender, on the first day of each Renewal Term, a fee equal to 1.00% of the total Revolving Commitment then in effect.

(e) The Borrowers shall pay to the Lender, in arrears, on the first Business Day of each month and the Maturity Date, a fee (the "**Collateral Tracking Fee**") equal to the product of (1) the average Outstanding Balance of the Revolving Loan for the prior month, calculated as the arithmetic average of all daily balances, *multiplied by* (2) a fraction, expressed as a decimal, the numerator of which is equal to the actual number of days in the prior month and the denominator of which is 30, *multiplied by* (3) 0.03125%.

(f) On the Closing Date, Borrowers shall pay to Lender, in immediately available funds, a facility fee equal to 1.00% of the total Revolving Commitment.

(g) Upon the effective date of any increase in the total Revolving Commitment pursuant to Section 2.1(h), the Borrowers shall pay to the Lender a fee in an amount equal to 1.00% of any such increase in the total Revolving Commitment.

2.3 **Computation of Interest; Payment of Fees**. (a) Interest on the Revolving Loan and fees and other amounts calculated on the basis of a rate per annum shall be computed on the basis of actual days elapsed over a 360-day year.

(b) Whenever any payment to be made hereunder or under any other Loan Document shall be stated to be due and payable on a day which is not a Business Day, such payment shall be made on the next succeeding Business Day and such extension of time shall in such case be included in computing interest on such payment.

(c) All fees owed by the Borrowers under this Agreement are, and will be deemed hereunder for all purposes to be, fully earned and non-refundable on the due date thereof.

2.4 **Procedures for Payment**. (a) Each payment hereunder and under the other Loan Documents shall be made not later than noon (New York City time) on the day when due in lawful money of the United States of America without counterclaim, defense, offset, claim or recoupment of any kind and free and clear of, and without deduction for, any present or future withholding or other taxes, duties, levies, imposts, deductions, charges or other liabilities of any nature imposed on such payments or prepayments by or on behalf of any Governmental Entity, except for taxes upon or determined by reference to the Lender's net income imposed by the jurisdiction in which the Lender is organized or has its principal or registered lending office (all such nonexcluded taxes, levies, imposts, deductions, charges, withholdings and liabilities hereinafter referred to as "**Taxes**"). If any such Taxes are so levied or imposed on any payment to the Lender, the Borrowers will make additional payments in such amounts as may be necessary and which are documented in writing by the Lender so that the net amount received by the Lender, after withholding or deduction for or on account of all Taxes, including deductions applicable to additional sums payable under this Section 2.4, will be equal to the amount provided for herein or in the other Loan Documents. Whenever any Taxes are payable by the Borrowers with respect to any payments hereunder, the Borrowers shall furnish promptly to the Lender information, including certified copies of official receipts (to the extent that the relevant governmental authority delivers such receipts), evidencing payment of any such Taxes so withheld or deducted. If the Borrowers fail to pay any such Taxes when due to the appropriate taxing authority or fails to remit to the Lender the required information

evidencing payment of any such Taxes so withheld or deducted, the Borrowers shall indemnify the Lender for any incremental Taxes, interest or penalties that may become payable by the Lender as a result of any such failure.

(b) Notwithstanding anything to the contrary contained in this Agreement, the Borrowers shall pay any present or future stamp or documentary taxes, any intangibles tax or any other sales, excise or property taxes, charges or similar levies now or hereafter assessed that arise from and are attributable to any payment made hereunder or from the execution, delivery or performance of, or otherwise with respect to, this Agreement or any other Loan Documents and any and all recording fees relating to any Loan Documents securing any Lender Debt ("**Other Taxes**").

(c) The Borrowers shall indemnify the Lender for the full amount of any and all Taxes and Other Taxes (including, without limitation, any Taxes and Other Taxes imposed by any jurisdiction on amounts payable under this Section 2.4) paid or payable by the Lender (whether or not such Taxes or Other Taxes were correctly or legally asserted) and any liability (including penalties, interest and expenses) arising therefrom or with respect thereto. Indemnification payments due to the Lender under this Section 2.4 shall be made within 10 days from the date the Lender makes written demand therefor.

(d) Without prejudice to the survival of any other agreement of the Borrowers hereunder, the agreements and obligations of the Borrowers contained in this Section 2.4 shall survive the Full Payment of all Lender Debt hereunder and any termination of the Revolving Commitments.

(e) The Lender shall maintain in accordance with its usual practice a register evidencing the indebtedness of the Borrowers to the Lender resulting from each Revolving Advance owing to the Lender from time to time, including the amounts of principal and interest payable and paid to the Lender from time to time hereunder. In furtherance thereof, the Lender agrees that before disposing of any promissory note evidencing the Revolving Loan (if applicable), or any part thereof (other than by granting participations therein), the Lender will make a notation thereon of all Revolving Advances, principal payments previously made thereon, and of the date to which interest thereon has been paid; provided that the failure to make (or any error in the making of) any notation under any such promissory note shall not limit or otherwise affect the obligations of the Borrowers hereunder or under any such promissory note with respect to the unpaid portion of the Lender Debt. The parties hereto acknowledge and agree that the register entries made by the Lender as provided in this Section 2.4(e) shall be conclusive and binding for all purposes, absent manifest error.

2.5 **Indemnities**. (a) The Borrowers hereby agree to indemnify the Lender on demand against any loss or expense which the Lender or a branch or an Affiliate of such Person may sustain or incur as a consequence of any of the following: (1) any default in payment or prepayment of the principal amount of the Revolving Loan or any portion thereof or interest accrued thereon, as and when due and payable (at the due date thereof, by irrevocable notice of payment or prepayment, or otherwise); (2) the effect of the occurrence of any Default or Event of Default upon the Revolving Loan or any portion thereof; (3) the payment or prepayment of the principal amount of the Revolving Loan or any portion thereof on any day other than the last day of an Interest Period; or (4) the failure by the Borrowers to accept the Revolving Loan or any portion thereof after the Borrowers have requested such borrowing; in each case including, but not limited to, any loss or expense sustained or incurred in liquidating or employing deposits from third parties acquired to effect or maintain the Revolving Loan or any portion thereof. The Lender shall provide to the Borrowers a statement, supported when applicable by documentary evidence, explaining the amount of any such loss or expense it incurs, which statement shall be conclusive absent manifest error.

(b) The Borrowers hereby agree to indemnify and hold harmless the Lender and each of its Affiliates, directors, officers, agents, representatives, counsel and employees and each other Person, if any, controlling them or any of their respective Affiliates within the meaning of either Section 15 of the Securities Act of 1933, as amended, or Section 20(a) of the Exchange Act (each, an "**Indemnified Party**"), from and against any and all losses, claims, damages, costs and expenses (including reasonable counsel fees and disbursements) and liabilities which may be incurred by or asserted against such Indemnified Party with respect to or arising out of the Revolving Commitments hereunder, the Revolving Loan contemplated hereby, the Loan Documents, the Collateral (including, without limitation, the use thereof by any of such Persons or any other Person, the exercise by any Indemnified Party of rights and remedies or any power of attorney with respect thereto, and any action or inaction of any Indemnified Party under and in accordance with any Loan Documents), the use of proceeds of any financial accommodations provided hereunder, any investigation, litigation or other proceeding (pending or threatened) relating thereto, or the role of any such Person or Persons in connection with the foregoing whether or not they or any other Indemnified Party is named as a party to any legal action or proceeding ("**Claims**"). The Borrowers will not, however, be responsible to any Indemnified Party hereunder for any Claims to the extent that a court having jurisdiction shall have determined by a final nonappealable judgment that any such Claim shall have arisen out of or resulted solely from (1) actions taken or omitted to be taken by such Indemnified Party by reason of its bad faith, willful misconduct or gross negligence, or (2) a successful claim by the Borrowers, or any of them, against such Indemnified Party ("**Excluded Claims**"). Further, should any employee of an Indemnified Party, in connection with such employee's employment by such Indemnified Party, be involved in any legal action or proceeding in connection with the transactions contemplated hereby (other than relating to an Excluded Claim), the Borrowers hereby agree to pay to such Indemnified Party such reasonable per diem compensation as such Indemnified Party shall request for each employee for each day or portion thereof that such employee is involved in preparation and testimony pertaining to any such legal action or proceeding. Each Indemnified Party shall give the Borrowers prompt notice of any Claim with respect to which such Indemnified Party is seeking indemnification hereunder, setting forth a description of those elements of the Claim of which such Indemnified Party has knowledge. The Indemnified Party shall be permitted hereunder to select counsel to defend such Claim at the expense of the Borrowers. The Indemnified Parties and the Borrowers and their respective counsel shall cooperate with each other in all reasonable respects in any investigation, trial, and defense of any such Claim and any appeal arising therefrom.

2.6 **Maximum Interest**. No provision of this Agreement shall require the payment to the Lender or permit the collection by the Lender of interest in excess of the maximum rate of interest from time to time permitted (after taking into account all consideration which constitutes interest) by laws applicable to the Lender Debt and binding on the Lender (such maximum rate being the "**Maximum Permissible Rate**"). If the amount of interest (computed without giving effect to this Section 2.6) payable to the Lender in respect of any interest computation period would exceed the amount of interest computed in respect of such period at the Maximum Permissible Rate, the amount of interest payable to the Lender in respect of such period shall be computed at the Maximum Permissible Rate and any excess shall be applied to reduce any Lender Debt (other than interest) then owing to the Lender in such order as it shall determine.

2.7 **Use of Proceeds of Revolving Loan**. The Borrowers shall use the proceeds of the Revolving Loan for working capital and general corporate purposes.

## ARTICLE 3
## SECURITY

3.1 **Grant of Security Interests**. As collateral security for the Borrowers' obligations to pay the Lender Debt when due and payable and their indemnification obligations to the Lender Group

hereunder, each Loan Party hereby grants to the Lender for the benefit of the Lender Group a first-priority Lien (subject only to Permitted Liens) on and security interest in and right of set-off against all of the rights, title and interest of such Loan Party in and to all of the following assets of such Loan Party, whether now existing or hereafter acquired or arising, and wherever located (all of the following, together with all other collateral provided by the Loan Parties under the other Loan Documents as security for the Lender Debt, the "**Collateral**"):

(1) all Receivables, whether now owned or hereafter acquired;

(2) to the maximum extent permitted by law, all deposit accounts of such Loan Party, including, without limitation, each Lockbox and each Lockbox Account, and amounts held therein;

(3) all money and cash, including all Collections but excluding any money and cash deposited in Foreign Deposit Accounts;

(4) all Records relating to items (1) through (3) above;

(5) all general intangibles (excluding general intangibles consisting of patents, trademarks, patent and trademark applications, copyrights, trade names and other intellectual property but including proceeds and products of such general intangibles and any royalties and Receivables arising from the licensing of any such intellectual property to Qiagen pursuant to the license agreement entered into with Qiagen in 2005 (as such license is amended, restated, replaced or otherwise modified)), including franchise rights, licenses and Federal, state and local tax refund claims of all kinds;

(6) all goods, including without limitation all machinery, equipment, fixtures and all other tangible personal property, as well as all of such types of property leased and all rights and interests with respect thereto under such leases (including, without limitation, options to purchase), together with all present and future additions and accessions thereto, replacements therefor, component and auxiliary parts and supplies used or to be used in connection therewith, and all substitutes for any of the foregoing, and all manuals, drawings, instructions, warranties and rights with respect thereto;

(7) all inventory and documents of title relating thereto;

(8) all Contracts, to the extent not included in the definition of Receivables;

(9) all instruments, investment property, securities, security entitlements and securities accounts;

(10) all Equity Interests held by each Loan Party;

(11) all Records relating to items (5) through (10) above; and

(12) all proceeds of any kind or nature of the foregoing.

This Agreement will be deemed to be a security agreement within the meaning of the UCC.

Notwithstanding the foregoing, the Collateral does not include the Life Technologies Commercial Tort Claim.

3.2 **Other Collateral.** In addition, the Borrowers' obligations to pay the Lender Debt when due and payable and their indemnification obligations to the Lender Group hereunder are also secured by each Pledge Agreement.

3.3 **Release of Collateral**. Lender hereby agrees that upon 10 days written request by Borrower Representative, Lender will release its lien and security interest on the proceeds and products of, and Receivables and royalties arising from, general intangibles consisting of patents, trademarks, patent and trademark applications, copyrights, trade names and other intellectual property so long as (a) such written request is received by Lender after the first anniversary of the Closing Date, (b) no Event of Default has occurred since the Closing Date as a result of Loan Parties' failure to comply with Sections 10.1 or 10.2 (for the avoidance of doubt, any failure to comply with Section 10.2 that was cured pursuant to Section 10.3 shall be deemed an Event of Default for purposes of this Section 3.3(b)), (c) no other Event of Default is continuing and to Borrowers' knowledge, no event has occurred that in the future could reasonably be expected to result in an Event of Default, (d) on the date of such requested release and after giving effect to such release, the sum of (i) the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus (ii) the positive difference, if any, between (A) the Adjusted Borrowing Limit and (B) the sum of the then Outstanding Balance of the Revolving Loan is greater than $4,000,000, (e) the investigation and review pursuant to the May 14, 2012 subpoena from the Office of Inspector General of the US Department of Health and Human Services has (i) been terminated and evidence of such termination has been delivered to Lender, such evidence to be satisfactory to Lender in its Permitted Discretion, or (ii) or settled with no liability or monetary obligations imposed on the Loan Parties in excess of $1,000,000 unless with respect to this clause (ii), Loan Parties have cash on hand in operating deposit accounts that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement in an amount in excess of the amount of the liability incurred or imposed in connection with such investigation and the Loan Parties satisfy such liability with such cash without causing a Default or Event of Default under Section 8.1 hereof) and (f) the Cash Burn of the Loan Parties and their Subsidiaries on a consolidated basis as of the end of the most recent month ended, calculated on a trailing 3 months basis, shall not be less than $0.

## ARTICLE 4
## PAYMENT MECHANICS

4.1 **Payment Mechanics**. (a) On or prior to the Closing Date, the Borrowers, the Lender, and each Lockbox Bank shall have entered into a Depositary Agreement and shall have caused the Lockbox Banks to establish the Lockboxes and the Lockbox Accounts.

(b) Except to the extent that an Obligor has, prior to the Closing Date, been instructed to direct the proceeds of Receivables owing by such Obligor to the Lender Lockbox or Lender Lockbox Account (in the case of an Obligor that is a non-Governmental Entity) or the Borrower Lockbox or Borrower Lockbox Account (in the case of an Obligor that is a Governmental Entity), the Borrowers shall prepare, execute and deliver to (or, in the case of Notice to an Insurer, provide to the Lender for delivery to) each Obligor (or, in the case of a Governmental Entity, its fiscal intermediary) who is proposed to be a payor of Receivables, with copies to the Lender, on or prior to the Closing Date, a Notice, which Notice shall state the following: (1) in the case of any Notice to an Insurer or other Obligor, that, except as set forth in clause (3) below, all checks and EOBs from such Insurer on account of Receivables shall be sent to the designated Lender Lockbox and all wire transfers from such Insurer on account of Receivables shall be wired directly into a designated Lender Lockbox Account; (2) in the case of any Notice to a Governmental Entity, that all checks and EOBs from such Governmental Entity on account of Receivables shall be sent to the applicable Borrower Lockbox and all wire transfers on account of Receivables shall be wired directly into the applicable Borrower Lockbox Account; and (3) in

the case of any Notice to any Obligor of Receivables owing to Enzo Life Sciences, Axxora or any payor of royalties owing to Borrowers arising under any trademark, patent, copyrights or other intellectual property license, that all checks and EOB's from any such Receivables shall be wired directly into the deposit accounts set forth on Schedule III, which deposit accounts shall be subject to Control Agreements.

(c) Each Borrower covenants and agrees that, on and after the Closing Date, all invoices (and, if provided by the Borrowers, return envelopes) to be sent to Obligors shall set forth the following: (1) in the case of Insurers or other third party Obligors, only the address of a designated Lender Lockbox as a return address for payment of Receivables by check and delivery of EOBs, and only a Lender Lockbox Account with respect to wire transfers for payment of Receivables; (2) in the case of Governmental Entities, only the address of the designated Borrower Lockbox as a return address for payment of Receivables and delivery of EOBs, and only the designated Borrower Lockbox Account with respect to wire transfers for payment of Receivables, and (3) in the case of Obligors of Receivables owing to Enzo Life Sciences, Axxora or Receivables consisting of royalties owing to Borrowers arising under any trademark, patent, copyrights or other intellectual property license, only the address of a designated deposit account subject to a Control Agreement as a return address for payment of any such Receivables and delivery of EOBs. Each Borrower hereby further covenants and agrees to instruct and notify each of the members of its accounting and collections staff to provide identical information in communications with Obligors with respect to payment of Receivables, wire transfers and EOBs.

(d) Each Borrower shall maintain each of its Borrower Lockbox Accounts solely and exclusively for the receipt of payments on account of Receivables from Governmental Entities. The Borrowers shall take all actions necessary to ensure that no payments from any Person other than a Governmental Entity are deposited in the Borrower Lockbox Accounts.

4.2 **Misdirected Payments; EOBs**. (a) In the event that any Borrower receives an EOB or a Misdirected Payment in the form of a check, such Borrower shall immediately send such EOB or check to the appropriate Lender Lockbox or Borrower Lockbox, as the case may be. In the event that any Borrower receives a Misdirected Payment in the form of cash or wire transfer, such Borrower shall immediately wire transfer the amount of such Misdirected Payment directly into the appropriate Lender Lockbox Account. All Misdirected Payments shall be sent promptly upon receipt thereof and in no event later than the close of business on the first Business Day after receipt thereof.

(b) Each Borrower shall take such actions as are reasonably necessary or as are reasonably requested by the Lender to ensure that future payments from any Obligor of a Misdirected Payment shall be made in accordance with any Notice previously delivered to such Obligor or, in the case of any Person which is an Insurer and has not previously been sent a Notice, to a designated Lender Lockbox, in the case of checks and EOBs, or a designated Lender Lockbox Account, in the case of wire transfers, including, without limitation, (1) delivering to such Obligor a new Notice in form and substance satisfactory to the Lender, and (2) contacting such Obligor by telephone to convey new directions for payment or to confirm the instructions previously set forth in any Notice to such Obligor. If such Borrower does not promptly (and in any event, within two Business Days from the Lender's request) take such actions or such similar actions as the Lender may request, then the Lender, its assigns or designees, or any member of the Lender Group, may, to the maximum extent permitted by law, execute and deliver such Notices, contact such Obligors to convey such instructions or directions, or take such similar actions as the Lender, its assigns or designees or any member of the Lender Group may, in its discretion, deem appropriate.

4.3 **No Rights of Withdrawal**. No Borrower shall have any rights of direction or withdrawal with respect to amounts held in the Lender Lockbox Accounts.

**ARTICLE 5**
**COLLECTION AND DISTRIBUTION**

5.1 **Collections on the Receivables; Distributions**. The Lender may (1) receive and hold as collateral all Receivables, deposits, and all collections on Receivables in accordance with the terms of the Depositary Agreements; and (2) have and exercise any and all rights, to the extent permitted by, and in a manner consistent with, all applicable laws and regulations, to collect, record, track and, upon the occurrence of an Event of Default, take all actions to obtain collections with respect to all Receivables. Each Borrower hereby consents to the distribution by the Lender of all Collections and proceeds of Collateral in accordance with this Article 5 and hereby authorizes and directs the Lender to distribute all Collections and proceeds of Collateral in accordance with this Article 5.

5.2 **Distribution of Funds**. On each Business Day (provided, with respect to distributions made prior to the Maturity Date and so long as no Event of Default exists, that the Borrowers shall have successfully sent by Transmission to the Lender all Receivable Information required with respect to the Receivables), the Lender shall distribute any and all cash Collections in the Collection Account (provided, with respect to distributions made prior to the Maturity Date and so long as no Event of Default exists, that such Collections were deposited in the Collection Account prior to noon (New York City time) on the immediately preceding Business Day) as follows:

(1) FIRST, to the Lender, an amount in cash equal to expenses incurred with respect to the administration, service and maintenance of the Lender's Lien on the Collateral and all fees and collection costs that are due and payable, if any, as set forth in Sections 2.5 and 12.5 until such amounts have been paid in full;

(2) SECOND, to the Lender, an amount in cash equal to fees, interest and expenses that are due and payable to the Lender as of such Business Day and have not otherwise been paid in full by the Borrowers, if any, until such amounts have been paid in full;

(3) THIRD, to the Lender, an amount in cash equal to the principal amount of the Revolving Loan, until such amount has been paid in full;

(4) FOURTH, to the Lender, an amount in cash equal to the aggregate amount of any other Lender Debt due and payable on such Business Day, if any, until such amount has been paid in full; and

(5) FIFTH, to the Borrower Account, all remaining amounts of Collections.

5.3 **Servicing Receivables**. (a) Subject to the review and authority of the Lender, the Borrowers shall administer and service the Receivables (1) in compliance at all times with all legal requirements and the terms and conditions of this Agreement, (2) in accordance with industry standards for servicing receivables of the type included in the Collateral to the extent that such standards do not conflict with the terms and conditions of this Agreement, (3) in a manner consistent in all respects with the Credit and Collection Policy, and (4) until such time as a successor servicer shall be designated by Lender, after the occurrence and during the continuance of an Event of Default, and shall accept appointment pursuant to this Section 5.3. The Borrowers shall establish and maintain electronic data processing services for monitoring, administering, and collecting the Receivables in accordance with the foregoing standards and shall, within three Business Days of the deposit of any checks, other forms of cash deposits, EOBs, or other written matter into a Lockbox, post such information to its electronic data processing services.

(b) The Borrowers shall not change in any material respect their existing policies and procedures with respect to the administration and servicing of accounts receivable (including, without limitation, the amount and timing of write-offs) without the prior written consent of the Lender.

(c) If the Borrowers determine that a payment with respect to a Receivable has been received directly by a patient or any other Person, the Borrowers shall promptly advise the Lender, and demand that such patient or other Person remit and return such funds. If such funds are not promptly received by the Borrowers, the Borrowers shall take all reasonable steps to obtain such funds.

(d) Upon the occurrence and during the continuance of an Event of Default, (1) the Lender may terminate the Borrowers' performance of servicing responsibilities with respect to the Receivables and appoint another Person to succeed the Borrowers in the performance of such servicing responsibilities (which replacement may be effectuated through the outplacement to a third-party collection firm obligated to use commercially reasonable efforts to maximize collections in accordance with the provisions of Article 9 of the UCC), in which event the Borrowers shall immediately transfer to any successor servicer designated by the Lender all records, computer access and other information as shall be necessary or desirable, in the judgment of any such successor servicer, to perform such responsibilities; and (2) at the Lender's request, all enforcement and collection proceedings with respect to the Receivables shall, unless prohibited by applicable law, be instituted and prosecuted in the name of the Lender. The Borrowers shall otherwise cooperate fully with such successor servicer.

(e) The members of the Lender Group and the Borrowers shall comply with the requirements of the Business Associate Agreement.

## ARTICLE 6
## CONDITIONS PRECEDENT

6.1 **Conditions Precedent to Closing**. The obligation of the Lender to make the initial Revolving Advance on the Initial Funding Date is subject to satisfaction of the following conditions precedent:

(1) that the Lender has received (A) payment of the fees due and payable to the Lender on or prior to the Closing Date under Section 2.2, and (B) payment of closing costs and expenses, including attorneys' fees;

(2) that the Lender has received evidence satisfactory to the Lender (A) that no material litigation has been initiated or is ongoing involving any Borrower or any of its Subsidiaries or shareholders, whether relating to this Agreement or the transactions contemplated hereby or otherwise except as set forth on Schedule II hereto, and (B) that no judgment, order, injunction, or other similar restraint prohibiting any of the transactions contemplated hereby has been issued or is in effect;

(3) that the Lender has received evidence satisfactory to the Lender that each Borrower is in material compliance with all applicable laws and regulations, and has obtained all licenses, consents and approvals necessary to operate its respective business and shall have obtained all material and appropriate approvals pertaining to all applicable governmental, ERISA, retiree health benefits, workers' compensation, and other requirements, regulations, and laws, including without limitation Environmental Laws;

(4) that the Lender has received executed originals of this Agreement and the other Loan Documents, and originals or copies (as specified by the Lender) of all of the other documents listed on the Closing Document Checklist attached hereto as Exhibit VI;

(5) the Lender has received file-stamped copies of UCC financing statements fielding each jurisdiction as may be necessary or appropriate or, in the opinion of the Lender, desirable to perfect the Liens created, or purported to be created, by this Agreement; and

(6) that the Lender has received evidence satisfactory to the Lender that the sum of (i) the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus (ii) the positive difference, if any, between (A) the Adjusted Borrowing Limit and (B) the sum of the then Outstanding Balance of the Revolving Loan is greater than $6,000,000 after giving effect to the transactions contemplated on the Closing Date;

6.2 **Conditions Precedent to all Funding Dates**. The making of a Revolving Advance on a Funding Date (including the initial Revolving Advance on the Initial Funding Date) will be subject to satisfaction of the following conditions precedent:

(1) that, with respect to Revolving Advances only, at least one Business Day prior to the applicable Funding Date, the Borrowers shall have delivered to the Lender a Borrowing Base Report and such other information as requested by the Lender, in form and substance satisfactory to the Lender;

(2) that on that Funding Date the following statements are true and correct (and acceptance of the proceeds of the applicable Revolving Advance will be deemed a representation and warranty by each Borrower that those statements are then true and correct):

(A) that the representations and warranties contained in Article 7 hereof and Exhibit I hereto are true and correct on and as of the date of such Revolving Advance as though made on and as of such date (except any representation or warranty that expressly indicates that it is being made as of a specified date, in which case each such representation or warranty is true and correct as of that specified date); and

(B) that no event has occurred and is continuing, or would result from such Revolving Advance or any actions connected therewith, that constitutes a Default or an Event of Default.

## ARTICLE 7
## REPRESENTATIONS AND WARRANTIES

**EACH BORROWER HEREBY MAKES, AND WILL BE DEEMED TO HAVE MADE, ON THE CLOSING DATE, ON THE INITIAL FUNDING DATE, ON EACH SUBSEQUENT FUNDING DATE, AND UPON DELIVERY OF EACH BORROWING BASE REPORT, THE FOLLOWING REPRESENTATIONS AND WARRANTIES TO THE LENDER:**

7.1 **Organization; Good Standing and Qualification**. Each Loan Party is duly formed and organized, validly existing and in good standing under the laws of the state of its organization (as indicated on Schedule II hereto) and is duly qualified to do business, and is in good standing, in every jurisdiction where the nature of its business requires it to be so qualified (except where the failure to be so qualified could not reasonably be expected to result in a Material Adverse Effect).

7.2 **Authority; No Conflict**. The execution, delivery and performance by each Loan Party of the Loan Documents to which it is a party and any other documents to be delivered by it thereunder (1) are within its corporate powers; (2) have been duly authorized by all necessary corporate, limited liability company or partnership action, as applicable; (3) do not contravene (A) its organizational documents, (B) any law, rule, or regulation applicable to it (including, without limitation, laws, rules and regulations relating to usury, truth in lending, fair credit billing, fair credit reporting, equal credit opportunity, fair debt collection practices, licensing, and privacy) in any material respect, (C) any contractual restriction binding on or affecting it or its Property except to the extent such contravention could not reasonably be expected to result in a Material Adverse Effect, or (D) any order, writ, judgment, award, injunction or decree binding on or affecting it or its Property; (4) do not result in or require the creation of any Lien upon or with respect to any of its Properties, other than the security interests created by this Agreement and the other Loan Documents; and (5) do not and will not result in any default, noncompliance, suspension, revocation, impairment, forfeiture or non-renewal of any permit, license, authorization or approval applicable to its operations or any of its Properties except where such default, noncompliance, suspension, revocation, impairment, forfeiture or non-renewal could not reasonably be expected to result in a Material Adverse Effect.

7.3 **Compliance with Certain Material Agreements**. No Loan Party is in violation of any material term of any material agreement or instrument binding on or otherwise affecting it or any of its Properties.

7.4 **Burdensome Agreements**. No Loan Party (1) is a party or subject to any contract, agreement, or restriction under its organizational documents that could reasonably be expected to have a Material Adverse Effect or (2) is a party or subject to any contract or agreement (other than this Agreement and the other Loan Documents) that conditions or restricts the right of that Loan Party to incur or repay Debt, to grant Liens on any assets, to declare or make Distributions, or to modify, extend, or renew any agreement evidencing any Debt.

7.5 **Certain Fees**. No investment banking, brokerage, finders' or similar fees are payable to any Person (other than to the Lender under the Loan Documents in connection with the execution, delivery and performance of this Agreement, the other Loan Documents or the transactions contemplated hereby or thereby).

7.6 **Valid and Binding Obligation; Enforceability**. Each of the Loan Documents to which any Loan Party is a party constitutes its legal, valid and binding obligation, enforceable against it in accordance with its terms, except as limited by bankruptcy, insolvency, moratorium, fraudulent conveyance or other laws relating to the enforcement of creditors' rights generally and general principles of equity (regardless of whether enforcement is sought at equity or law);

7.7 **Permits, Licenses, and Other Approvals**. Each Loan Party has all power and authority, and has all permits, licenses, accreditations, certifications, authorizations, approvals, consents and agreements of all Obligors, Governmental Entities, accreditation agencies and other Persons (including, without limitation, (1) accreditation by the appropriate Governmental Entities and industry accreditation agencies, (2) accreditation and certifications as a provider of healthcare services eligible to receive payment and compensation and to participate under Medicare, Medicaid, TRICARE/CHAMPUS, Blue Cross/Blue Shield and other equivalent programs, and (3) valid provider identification numbers and licenses to generate the Receivables) necessary or required for it (A) to own the assets (including Receivables) that it now owns, (B) to carry on its business as now conducted, (C) to execute, deliver and perform the Loan Documents to which it is a party, and (D) if applicable, to receive payments from the Obligors in the manner contemplated in this Agreement and the other Loan Documents, other than, which respect to clauses (A), (B) and (C) above, such permits, licenses, accreditations, certifications,

authorizations, approvals, consents and agreements which the Loan Parties' failure to obtain could not reasonably be expected to cause a Material Adverse Effect.

7.8 **Healthcare Laws**. Each Loan Party has maintained, in all material respects, all records required to be maintained by the Food and Drug Administration, the Drug Enforcement Agency, the State Boards of Pharmacy, and the federal and state Medicare and Medicaid programs as required by Healthcare Laws and under any other applicable laws, and that, to the best knowledge of each Loan Party, there are no presently existing circumstances which likely would result in material violations of any Healthcare Laws.

7.9 **Liability Event**. There is no Liability Event.

7.10 **Certain Reports; Claims; Reviews**. Without limiting or being limited by any other provision of any Loan Document, each Loan Party has timely filed or caused to be filed all cost and other reports of every kind required by law, agreement or otherwise, except where the failure to do so could not reasonably be expected to cause a Material Adverse Effect. Except as set forth on Schedule II, there are no material claims, actions or appeals pending before any commission, board or agency or other Governmental Entity, including, without limitation, any intermediary or carrier, the Provider Reimbursement Review Board, or the administrator of CMS, with respect to any material state or federal Medicare or Medicaid cost reports or material claims filed by each Loan Party, or any disallowance by any commission, board or agency or other Governmental Entity in connection with any audit of such cost reports. No validation review or program integrity review related to each Loan Party, the consummation of the transactions contemplated by this Agreement, or the Collateral have been conducted by any commission, board, or agency or other Governmental Entity in connection with the Medicare or Medicaid programs, and, to the knowledge of each Loan Party, no such reviews are scheduled, pending, or threatened against or affecting any of the providers, any of the Collateral or the consummation of the transactions contemplated by this Agreement.

7.11 **Rescission and Renewal of Permits, Licenses, and Other Approvals**. Except as disclosed on Schedule II hereto, no Loan Party has been notified by any Governmental Entity, accreditation agency or any other Person, during the immediately preceding 24-month period, that such Person has rescinded or not renewed, or is reasonably likely to rescind or not renew, any permit, license, accreditation, certification, authorization, approval, consent or agreement granted to it or to which it is a party and no other condition exists or event has occurred which, in itself or with the giving of notice or lapse of time or both, would result in the suspension, revocation, impairment, forfeiture or non renewal of any permit, license, authorization, approval, entitlement or accreditation, and to the best of each Loan Party's knowledge, there is no claim that any thereof is not in full force and effect.

7.12 **Subsidiaries; Capitalization**. Schedule II sets forth the full and complete organizational structure of the Loan Parties as of the Closing Date, including the names of all equityholders, the nature and terms of each equity interest, and the capital account or number of shares of each equityholder. All of the issued and outstanding Equity Interests in the Loan Parties have been validly issued and are fully paid and nonassessable, and the holders thereof are not entitled to any preemptive, first refusal or other similar rights. Except as indicated on Schedule II, all such Equity Interests are owned by the holder thereof free and clear of all Liens other than Permitted Liens. Except as set forth on Schedule II, there are no outstanding Debt or equity securities of the Loan Parties, or any of them, and no outstanding obligations of the Loan Parties, or any of them, convertible into or exchangeable for, or warrants, options or other rights for the purchase or acquisition from the Loan Parties, or any of them, or other obligations of the Loan Parties, or any of them, to issue, directly or indirectly, any Equity Interests. The Loan Parties have no Subsidiaries, other than as listed on Schedule II hereto.

7.13 **Real Property**. Schedule II contains a correct and complete list (indicating the location of such real property by street address and state) of all real property owned or leased by each Loan Party.

7.14 **Conditions Precedent**. As of the Closing Date, all conditions precedent set forth in Article 6 have been fulfilled or waived in writing by the Lender, and as of each Funding Date, all conditions precedent set forth in Section 6.2 shall have been fulfilled or waived in writing by the Lender.

7.15 **Financial Statements and Other Information**. All of the financial statements of the Loan Parties and their Subsidiaries which have been furnished to the Lender, fairly present the consolidated financial condition of the Loan Parties and their Subsidiaries as of the dates referred to therein and the results of the operations of the Loan Parties and their Subsidiaries for the periods ended on such dates, all in accordance with GAAP, and since July 31, 2012, there has been no change which has had or resulted in, or is reasonably likely to have or result in, a Material Adverse Effect. All information provided in the application for the financing effectuated by this Agreement, and each other document, report and Transmission provided by or on behalf of any Loan Party to the Lender Group is or shall be true and accurate in all material respects as of its date and as of the date so furnished; provided that, with respect to projected financial information, each Loan Party represents only that such information was prepared in good faith based upon assumptions believed to be reasonable at the time. Each Loan Party has disclosed to the Lender all agreements, instruments and corporate or other restrictions to which it is subject, and all other matters known to it, that, individually or in the aggregate, could reasonably be expected to have or result in a Material Adverse Effect, and, as of the Closing Date, there exists no contingent liability or other fact or circumstance that could reasonably be expected to have or result in a Material Adverse Effect which has not been set forth on Schedule II hereto.

7.16 **Litigation**. Except as disclosed on Schedule II hereto, there is no pending or, to its knowledge, threatened action or proceeding or investigation, injunction, writ or order affecting any Loan Party before or by any court, Governmental Entity or arbitrator which could reasonably be expected to having or result in a Material Adverse Effect or which purports to affect the legality, validity or enforceability of this Agreement or any other Loan Document, and neither the Loan Parties nor any of their Subsidiaries is currently the subject of, nor does any of such Persons have any present intention of commencing or filing, an insolvency proceeding or petition in bankruptcy.

7.17 **Ownership of Collateral; Liens**. Each Loan Party is the legal and beneficial owner of the Collateral and upon the execution of the Loan Documents and the filing of the UCC financing statements with respect thereto the Lender will hold a valid, perfected and continuing first priority Lien in the Collateral as security for the Lender Debt, free and clear of any Lien (including any Lien in favor of the Internal Revenue Service, any Employee Benefit Plan, any Multiemployer Plan or the PBGC) other than Permitted Liens. No effective financing statement or other instrument similar in effect covering the Receivables is on file in any recording office other than those in favor of the Lender relating to this Agreement, and no competing notice or notice inconsistent with the transactions contemplated in this Agreement has been sent to any Obligor.

7.18 **Locations**. Each Loan Party's exact name, principal place of business and chief executive office, and the office where it keeps its data, books, and records concerning the Receivables and other Collateral, and where Receivables and payments thereon are processed, are located at the addresses referred to on Schedule I hereto and, as of the Closing Date, except as disclosed on Schedule II hereto, there have been no other such locations for the four immediately prior months. Except as disclosed on Schedule II hereto, it has not changed its principal place of business or chief executive office in the last five years. Except as disclosed on Schedule II hereto, it has not used and does not now use any fictitious or trade name during the five years immediately prior to the date of this Agreement and, as of the Closing Date, it has not changed its name in the last 24 months.

7.19 **Notices**. All required Notices have been prepared and delivered to each of its Obligors, and all invoices now bear only the appropriate remittance instructions for payment direction to the Lockboxes or the Lockbox Accounts, as the case may be.

7.20 **Taxes**. Each Loan Party has filed on a timely basis all tax returns (federal, state, and local) required to be filed and has paid, or made adequate provision for payment of, all taxes, assessments and other governmental charges due from it. No tax Lien has been filed and is now effective against it or any of their respective Properties except any Lien in respect of taxes and other charges not yet due or contested in good faith by appropriate proceedings. To its best knowledge, and except as disclosed on Schedule II hereto, there is no pending investigation by any taxing authority or any pending but unassessed tax liability relating to it, that is not related to a Loan Party's ongoing ordinary course local sales tax audits.

7.21 **Solvency**. Both before and after giving effect to the transactions contemplated by this Agreement, each Loan Party (1) was and is solvent; (2) had not and has not incurred debts or liabilities beyond its ability to pay; and (3) had and will have an adequate amount of capital to conduct its business in the foreseeable future; the transactions contemplated hereunder and under the other Loan Documents, including the granting of Liens on the Collateral, are made by each Loan Party in good faith and without intent to hinder, delay or defraud any of its present or future creditors.

7.22 **Lockboxes and Lockbox Accounts**. Each Borrower maintains only the Borrower Lockboxes and only the Borrower Lockbox Accounts described on Schedule III hereto for Receivables the Obligors with respect to which are Governmental Entities. The Lender Lockbox is the only post office box and the Lender Lockbox Account is the only lockbox account maintained for Receivables, the Obligors with respect to which are not Governmental Entities; provided however that with respect to (a) royalties owing to Borrowers arising under any trademark, patent, copyrights or other intellectual property license, and (b) Receivables owing to Enzo Life Sciences and Axxora, Borrowers may maintain the other deposit accounts set forth on Schedule III to the extent such deposit accounts are subject to Control Agreements. In addition, the Receivables, if any, of Enzo Therapeutics shall not be required to be deposited into a Borrower Lockbox, Borrower Lockbox Account, Lender Lockbox or Lender Lockbox Account. No direction is in effect directing Obligors to remit payments on Receivables other than to the applicable Lockbox and Lockbox Account, each as described on Schedule III.

7.23 **ERISA Matters**. (a) With respect to each of the Employee Benefit Plans, and, to the knowledge of each Loan Party, each of the Multiemployer Plans has complied with and been administered in all material respects in accordance with its terms and is in compliance in all material respects with all applicable laws including ERISA and the IRC. No Loan Party or ERISA Affiliate has been notified by the sponsor of a Multiemployer Plan that such Multiemployer Plan is in reorganization or has been terminated, within the meaning of Title IV of ERISA. Schedule II separately identifies as of the date hereof all Plans, all Multiemployer Plans, and all Welfare Plans (as defined in Section 2111 of ERISA which provide self insured benefits ("Welfare Plans")

(b) No ERISA Event has occurred, and none of the Loan Parties is aware of any fact, event, or circumstance that could reasonably be expected to constitute or result in an ERISA Event with respect to any Plan.

(c) There are no pending actions, claims or lawsuits that have been asserted or instituted against any of Plan, Multiemployer Plan or Welfare Plan, the assets of any of the trusts under such plans, the plan sponsor, the plan administrator or any fiduciary of any such plan (other than routine benefit claims), and, to the knowledge of each Loan Party and all ERISA Affiliates, there are no facts which could form the basis for any such action, claim or lawsuit. There are no investigations or audits by

any Governmental Entity of any of the Plans, Multiemployer Plans or Welfare Plans, any trusts under such plans, the plan sponsor, the plan administrator or any fiduciary of any such plan that have been instituted or threatened, and, to the knowledge of each Loan Party and all ERISA Affiliates, there are no facts that could form the basis for any such investigation or audit.

7.24 **Patient Consent Forms**. Borrowers do not require or use any patient consent forms relating to the disclosure of certain demographic and medical information of patients and the failure to use such forms will will not result in a violation of any applicable laws, rules and regulations.

7.25 **Holding Companies.** Enzo Life Sciences U.S. Holding Corp. owns no assets other than the Equity Interests of Enzo Life Sciences and Axxora and Enzo Life Sciences Holding Company, Inc. owns no assets other than the Equity Interest of Enzo Life Sciences U.S. Holding Corp. and neither entity has any operations other than acting as a holding company.

## ARTICLE 8
## AFFIRMATIVE COVENANTS

**UNTIL THE FULL PAYMENT OF ALL LENDER DEBT AND THE TERMINATION OF THE REVOLVING COMMITMENT HEREUNDER, THE LOAN PARTIES AGREE TO PERFORM AND TO CAUSE EACH OF THE OTHER LOAN PARTIES, AND ANY SUBSIDIARY OF ANY LOAN PARTY, IF APPLICABLE, TO PERFORM ALL COVENANTS IN THIS ARTICLE 8.**

8.1 **Compliance with Laws**. Each Loan Party and each of its Subsidiaries shall comply in all material respects with all applicable laws (including, without limitation, all applicable Healthcare Laws and Environmental Laws), rules, regulations and orders. Each Loan Party shall obtain, maintain and preserve, and cause each of its Subsidiaries to obtain, maintain and preserve, and take all necessary action to timely renew, all permits, licenses, authorizations, approvals, entitlements and accreditations which are necessary in, or material to, the proper conduct of its business.

8.2 **Offices, Records and Books of Account, Names**. Each Loan Party shall keep its principal place of business and chief executive office and the offices where it keeps its records concerning the Collateral at its address set forth on Schedule I or, upon 30 days' prior notice to the Lender, at any other locations in jurisdictions where all actions reasonably requested by the Lender or otherwise necessary to protect, maintain and perfect the Lender's Lien on the Collateral have been taken and completed. Each Loan Party shall maintain proper books and accounts in which full, true and correct entries in conformity with GAAP are made of all dealings and transactions in relation to its business and activities and shall not make any notation on its books and records, including any computer files, that is inconsistent with the assignment of the Collateral to the Lender as collateral security. Each Loan Party shall maintain and implement administrative and operating procedures (including, without limitation, an ability to recreate records evidencing Receivables and related contracts and pertinent documentation with respect to all other Collateral in the event of the destruction of the originals thereof), and keep and maintain all documents, books, records and other information reasonably necessary or advisable for collecting all Receivables (including, without limitation, records adequate to permit the daily identification of each Receivable and all Collections of and adjustments to each existing Receivable) and for providing the Receivable Information. Each Loan Party shall keep its exact legal name as set forth on Schedule II hereto and will not change its name without providing 30 days' prior notice to the Lender and taking and completing all actions reasonably requested by the Lender or otherwise necessary to protect, maintain and perfect the Lender's Lien on the Collateral.

8.3 **Performance and Compliance with Contracts and Credit and Collection Policy**. Each Loan Party shall, at its expense, timely and fully perform and comply with all material provisions, covenants and other promises required to be observed by it under all contracts related to the Receivables and other Collateral. Each Loan Party shall timely and fully comply in all material respects with the Credit and Collection Policy in regard to the Collateral, including each Receivable and the related contract, and it shall maintain, at its expense, in full operation each of the bank accounts and lockboxes required to be maintained under this Agreement. Each Loan Party shall do nothing, nor suffer or permit any other Person, to impede or interfere with the collection by the Lender, or any other Person designated by the Lender or on its behalf, of the Collateral, including the Receivables.

8.4 **Audits; Appraisals**. Each Loan Party shall, at any time and from time to time during regular business hours as requested by the Lender, permit the Lender (who may be accompanied by any members of the Lender Group) or its representatives, upon reasonable notice or during the continuance of any Event of Default without notice, and subject to compliance with applicable law and the Business Associate Agreement, in the case of review of patient/customer information, to do any of the following: (1) on a confidential basis, examine and make copies of and abstracts from all books, records and documents (including, without limitation, computer tapes and disks) in such Loan Party's possession or under its control relating to the Collateral and the financial condition and operations of the Loan Parties', including, without limitation, the related contracts; (2) visit such Loan Party's offices and properties for the purpose of discussing financial condition, performance and operations of the Loan Parties, and examining and auditing such materials described in clause (1) above; and (3) discuss accounting, operational, performance, financial and general business matters relating to the Loan Parties, matters relating to the Collateral or Contracts relating to the Collateral, or matters relating to such Loan Party's performance under the Loan Documents with any of such Loan Party's officers or employees having knowledge of such matters; provided however that so long as no Default or Event of Default has occurred and is continuing, the Loan Parties shall not be liable for the costs and fees for any such audits and visits in excess of $60,000 (exclusive of out of pocket costs and expenses) in any fiscal year. Each Loan Party shall, at its expense and upon the Lender's request, provide the Lender with appraisals or updates thereof of any or all of its equipment, inventory, scripts, real property and other assets, prepared on a basis and in form and substance satisfactory to the Lender, such appraisals and updates to include, without limitation, information required by applicable law and regulation and by the internal policies of the Lender

8.5 **Reporting Requirements**. The Loan Parties shall provide to the Lender (in multiple copies, if requested by the Lender) the following:

(1) (A) on or prior to the 15th day of each month, by Transmission (unless otherwise agreed by the Lender), the Monthly Report for the prior month and (B) on or prior to the 30$^{th}$ day of each month, for the prior month, a Borrowing Base Report based on reconciliations and adjustments reflected in the Monthly Report described in (A) above, certified by the Chief Financial Officer, Senior Vice President of Finance or another authorized officer, satisfactory to Lender in its Permitted Discretion, of the Borrowers;

(2) as soon as available and in any event within 75 days after the end of each fiscal year of the Loan Parties, the following:

(A) a copy of the audited consolidated financial statements (together with explanatory notes to financial statements thereon which include segment operating results) and the auditor's report letter for such year for the Loan Parties, containing financial statements for such year audited by independent certified public accountants of recognized standing acceptable to the Lender and a copy of any management letter or written report submitted to the Loan Parties by independent certified public

accountants with respect to the business, condition (financial or otherwise), operations, prospects, or Properties of the Loan Parties;

(B) a Compliance Certificate; and

(C) a report satisfactory in form to the Lender, listing all material insurance coverage maintained as of the date of such report by the Loan Parties and all material insurance planned to be maintained by the Loan Parties in the subsequent fiscal year.

(3) as soon as available and in any event (i) no later than 30 days after the end of each month (other than the months of April, July, August, October and January), (ii) no later than October 30 for the month ending August 31, and (iii) no later than 45 days after the end of each fiscal quarter, the following:

(A) consolidated and consolidating monthly balance sheets and income statements and quarterly statements of changes in cash flow of the Loan Parties and their Subsidiaries as of the end of such month or quarter, as applicable, as the case may be, and for the period commencing at the beginning of the current fiscal year and ending with the end of such month or quarter, as the case may be, certified by the Chief Financial Officer, Senior Vice President of Finance of Enzo or Director of External Reporting; and

(B) a Compliance Certificate.

(4) no later than 75 days after the commencement of each fiscal year of the Loan Parties, a consolidated and consolidating operating plan (together with a complete statement of the material assumptions on which such plan is based) of the Loan Parties and their Subsidiaries approved by the applicable Boards of Directors (or equivalent governing bodies) which shall include budgeted monthly profits and loss statements and quarterly cash flow projections for the prospective year together with capital expenditures and facilities plans in reasonable detail acceptable to the Lender;

(5) the Loan Parties shall promptly (and in no event later than two Business Days following its obtaining actual knowledge thereof) notify the Lender of the following: (A) any breach by any Loan Party or any Subsidiary of any Loan Party of any covenants or representations and warranties hereunder or under any other Loan Document, including, without limitation, upon discovery of a breach of the Eligibility Criteria; and (B) the occurrence of any Default or any Event of Default, such notice to be accompanied by a statement of the Chief Financial Officer, Senior Vice President of Finance or another authorized officer, satisfactory to Lender in its Permitted Discretion, of Borrower Representative setting forth details of such Default or Event of Default, and the initial action that the Loan Parties have taken or propose to take with respect thereto;

(6) (A) promptly and in any event within 10 days after any Loan Party or any ERISA Affiliate knows or has reason to know that (i) any ERISA Event has occurred or that a request for a minimum funding waiver under Section 412 of the IRC has been filed with respect to any Plan or Multiemployer Plan, a written statement of an Authorized Officer of the Loan Parties describing such ERISA Event or waiver request and the action, if any, the applicable Loan Party or ERISA Affiliate proposes to take with respect thereto and a copy of any notice filed with the PBGC or the IRS pertaining thereto, (ii) any Loan Party or any ERISA Affiliate knows or has reason to know that a material non-exempt

prohibited transaction (as defined in Section 406 of ERISA or Section 4975 of the IRC) has occurred together with a written statement of an Authorized Officer of the applicable Loan Party describing such transaction and the action, if any, the applicable Loan Party or ERISA Affiliate proposes to take with respect thereto, (iii) any material increase in the benefits of any existing Plan, or the establishment of any new Plan or the commencement of contributions to any Plan to which any Loan Party or any ERISA Affiliate was not contributing previously, shall occur, or (iv) any Loan Party or any ERISA Affiliate shall receive an unfavorable determination letter from the Internal Revenue Service regarding the qualification of a Plan under Section 401(a) of the Code, together with copies of such letter and (B) simultaneously with the date that any Loan Party or any ERISA Affiliate files a notice of intent to terminate any Plan, if such termination would require material additional contributions in order to be considered a standard termination within the meaning of Section 4041(b) of ERISA, copies of each such notice.

(7) promptly (and in no event later than one Business Day after actual knowledge or notice thereof is obtained or received), notice in reasonable detail, of the following: (A) any Lien asserted or claim made against a Receivable or any Lien asserted or claim made against any other Collateral other than a Permitted Lien; and (B) the occurrence of any other event which could reasonably be expected to adversely affect the value of any equipment, inventory, real property or other assets of any Loan Party, the other Collateral or the interest of the Lender therein;

(8) promptly (and in no event later than two Business Days after actual knowledge or notice thereof is obtained or received), notice in reasonable detail, of any notice of any investigations or audits (including cost reports or similar audits regarding the valuation of receivables payments) of the any Loan Party or any of its Subsidiaries being conducted by any federal, state or county Governmental Entity or its agents or designees, and the results thereof;

(9) promptly, and in any event within two Business Days after becoming aware of the occurrence thereof, notice in reasonable detail of (A) any material reduction to any rate for reimbursement under any agreement with any Obligor, (B) any material system charge master change that would affect the Expected Net Value of Eligible Receivables of any Obligor, or (C) any matter that could reasonably be expected to have an adverse effect on (i) any Loan Party's rights to reimbursement under any agreement with, and the amount of any related payments from, any Obligor or (ii) the Expected Net Value of Eligible Receivables of any Loan Party;

(10) promptly, and in any event within five Business Days after becoming aware of the occurrence thereof, notice of any change in the director of billings and similar senior executive with respect to the collections personnel of Enzo Clinical Labs;

(11) promptly, and in any event within three Business Days after becoming aware of the occurrence thereof, notice of any matter that could reasonably be expected to have or result in a Material Adverse Effect;

(12) as soon as available, (A) copies of each financial statement, report, notice or proxy statement sent by any Loan Party to its stockholders generally that is reasonably related to the Collateral or the financial condition of the Loan Parties, and (B) copies of each press release or other statement made available by any Borrower to the public concerning developments in the business of the any Loan Party;

(13) on each Funding Date, and more frequently if requested by the Lender, estimates of amounts of Receivables which are subject to offset by any Governmental Entity;

(14) such other information respecting the Receivables, the equipment, inventory, real property or other assets of each Loan Party, the other Collateral or the condition or operations, financial or otherwise, of any Loan Party and its Subsidiaries as the Lender may from time to time reasonably request.

8.6 **Notice of Proceedings; Overpayments**. The Borrowers shall promptly notify the Lender (and modify the next Borrowing Base Report to be delivered hereunder to reflect same) in the event of any action, suit, proceeding, dispute, set-off, deduction, defense or counterclaim that is asserted by an Obligor with respect to any of the Receivables. The Borrowers shall make all payments to the Obligors necessary to prevent the Obligors from offsetting any earlier overpayment by the Obligors against any amounts the Obligors owe on any Receivables.

8.7 **Taxes**. (a) Each Loan Party shall, and shall cause each of its Subsidiaries to do the following: (1) file when due all federal, national and state income and other tax returns and other reports which it is required to file; and (2) subject to the other terms of this Section 8.7, pay, or provide for the payment, when due, of all taxes (including, without limitation, sales taxes), fees, assessments and other governmental charges against it or upon its Property, income or franchises, including taxes relating to the transactions contemplated under this Agreement, make all required withholding and other tax deposits, and establish adequate reserves for the payment of all such items, and provide to the Lender, upon request, satisfactory evidence of its timely compliance with the foregoing.

(b) So long as the Loan Parties have notified the Lender in writing, the applicable Loan Party or any of its Subsidiaries will not be required under this Section 8.7 to pay an amount referred to in clause (2) of Section 8.7(a) if (1) the applicable Loan Party is contesting that amount in good faith by appropriate proceedings diligently pursued; (2) the applicable Loan Party has established proper reserves as provided in GAAP with respect to that amount; and (3) no Lien (other than a Permitted Lien) results from non-payment of that amount.

(c) Except pursuant to any tax sharing agreement disclosed in Schedule II hereto or any other tax sharing arrangements among the Loan Parties acceptable to Lender in its Permitted Discretion, no Loan Party shall have any obligation under any tax sharing agreement.

8.8 **Preservation of Existence**. Each Loan Party shall preserve and maintain its existence, rights, franchises and privileges in the jurisdiction of its organization, and qualify and remain qualified in good standing as a foreign corporation in each jurisdiction where the failure to maintain such qualification would have or result in a Material Adverse Effect.

8.9 **Loan Documents**. Each Loan Party shall, at its sole expense, timely and fully perform and comply with all provisions, covenants and other promises required to be observed by it under the Loan Documents, maintain the Loan Documents in full force and effect, enforce each Loan Document in accordance with its terms, take all such action to such end as may be from time to time reasonably requested by the Lender and make upon any party to the Loan Documents such demands and requests for information and reports or for action as such Loan Party is entitled to make thereunder and as may be from time to time reasonably requested by the Lender. Each Loan Party shall not permit any waiver, modification, or amendment of any Loan Document, except as may be requested by the Lender.

8.10 **Farmingdale Property** (i) During the continuance of an Event of Default, or (ii) upon the execution or issuance of any settlement agreement, consent order or decree, stipulation or similar

agreement or order, or any judgment, imposing any liability in excess of $1,000,000 on any Loan Party in connection with any investigations by the Office of Inspector General or any related Governmental Entity (unless with respect to this clause (ii), Loan Parties have cash on hand in operating deposit accounts that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement in an amount in excess of the amount of the liability incurred or imposed in connection with such investigation and Loan Parties satisfy such liability with such cash without causing a Default or Event of Default under Section 8.1 hereof), at Lender's request in its sole discretion, Loan Parties shall deliver to Lender a mortgage on the Farmingdale Property, in form and substance satisfactory to Lender in its Permitted Discretion, together with any insurance policies and endorsements, legal opinions, fixture filings, environmental reports and other related instruments or agreements as Lender may request in its Permitted Discretion.

8.11 **Invoices**. Each Loan Party shall take all reasonable steps to ensure that all invoices rendered or dispatched on or after the Closing Date contain only the remittance instructions required under Article 4 of this Agreement.

8.12 **ERISA Compliance**. Each Loan Party shall, and shall cause its ERISA Affiliates to, make all required contributions to each Plan and shall not, nor shall it permit any ERISA Affiliate to, cause or permit to occur: (1) an event that could result in the imposition of a lien under Section 412 of the IRC or Section 302 or 4068 of ERISA, (2) an ERISA Event that would have a Material Adverse Effect in the aggregate, (3) the adoption of a new Employee Plan or the amendment of an existing Employee Plan, or an agreement to contribute to any Multiemployer Plan if the increase in its obligations as a result thereof could reasonably be expected to have a Material Adverse Effect in the aggregate.

8.13 **Equipment.** Each Loan Party shall, in accordance with sound business practices, maintain all equipment and other Properties used by it in its business (other than obsolete or worn-out equipment) in good repair, working order and condition (normal wear and tear and immaterial impairments of value and damage by the elements excepted) and make all necessary repairs, renewals, replacements and improvements thereof so that the value and operating efficiency thereof shall at all times be maintained and preserved.

8.14 **Insurance**. Each Loan Party shall keep insured by financially sound and reputable insurers all Property of a character usually insured by corporations engaged in the same or similar business similarly situated, including without limitation, all Collateral, against loss or damage of the kinds and in the amounts customarily insured against by such corporations and carry such other insurance as is usually carried by such corporations conducting a similar business in similar locales. Each policy referred to in this Section 8.14 shall provide that it will not be canceled, amended, or reduced except after not less than 30 days' prior notice to the Lender and shall also provide that the Lender (or its designees and assigns) shall be named as loss (or co-loss) payee and additional insured, as applicable and as its interests may appear, and such interests shall not be invalidated by any act or negligence of any Loan Party. The Loan Parties shall advise the Lender promptly of any notice of any policy cancellation, reduction, or amendment. Each insurance policy for property, casualty, liability and business interruption coverage for each Loan Party shall name the Lender as lender loss payee (as its interests may appear) or an additional insured, as appropriate.

8.15 **Post Closing**. Loan Parties shall deliver (i) within thirty (30) days of the Closing Date, a landlord waiver, in form and substance satisfactory to Lender in its Permitted Discretion, from the landlord of the property located at 5777 Hines Drive, Ann Arbor, Michigan 48108 pursuant to which, inter alia, such landlord waives or subordinates any contractual or statutory liens it has on any Collateral to the lien of Lender and agrees to provide Lender reasonable access to such premises and the Collateral, (ii) within ninety (90) days of the Closing Date, Borrowers shall close account number 4977160196 at

Citibank, (iii) within ten (10) days of the Closing Date, deliver stock certificates evidencing all investment property and general intangibles, if applicable, pledged as Collateral hereunder and under the Pledge Agreements together with stock powers endorsed in blank, and (iv) within thirty (30) days of the Closing Date, deliver to Lender, Control Agreements, in form and substance satisfactory to Lender in its Permitted Discretion, for all deposit and other accounts maintained at Bank of America.

## ARTICLE 9
## NEGATIVE COVENANTS

**UNTIL THE FULL PAYMENT OF ALL LENDER DEBT, THE TERMINATION OF THE REVOLVING COMMITMENT HEREUNDER, EACH LOAN PARTY AGREES TO PERFORM AND CAUSE EACH OF THE OTHER LOAN PARTIES, AND THEIR SUBSIDIARIES, IF APPLICABLE, TO PERFORM ALL COVENANTS IN THIS ARTICLE 9.**

9.1 **Corporate Documentation**. No Loan Party shall modify, amend, or alter its organizational documents in any manner that is adverse to the interests of the Lender or in any other material manner.

9.2 **Debt**. No Loan Party, or any Subsidiary of any Loan Party, shall incur or assume any Debt following the Closing Date other than Permitted Debt.

9.3 **Subordination**. No Loan Party, or any Subsidiary of any Loan Party, shall, directly or indirectly (1) at any time pay any amount of principal or prepay, defease, purchase or redeem any Debt, during the continuance of an Event of Default, or (2) pay any amount of principal or cash interest on any Subordinated Debt, but nothing in this Section 9.3 prohibits payment of non-cash interest "in-kind" thereunder.

9.4 **Liens**. No Loan Party, or any Subsidiary of any Loan Party, shall create or suffer to exist any Liens upon or with respect to any of its Properties (including, without limitation, any Collateral and any general intangibles consisting of patents, trademarks, patent and trademark applications, copyrights, trade names and other intellectual property) or assign any right to receive income in respect thereof, except Permitted Liens.

9.5 **Lease Obligations**. No Loan Party, or any Subsidiary of any Loan Party, shall enter into, or suffer to exist, any lease of real or personal Property as lessee or sublessee (other than a Capital Lease and such Loan Party's operating leases in existence on the Closing Date and listed on Schedule II hereto), if, after giving effect thereto, the aggregate amount of Rentals (as hereinafter defined) for the Loan Parties and their Subsidiaries on an aggregate basis in any fiscal year in respect of such lease and all other such leases would exceed $6,500,000. The term "Rentals" means all payments due from the lessee or sublessee under a lease, including, without limitation, basic rent, percentage rent, property taxes, utility or maintenance costs, and insurance premiums.

9.6 **Asset Sales; Sale/Leaseback Transaction; Etc**. No Loan Party, or any Subsidiary of any Loan Party, shall sell, assign (by operation of law or otherwise), transfer, lease, sublease, liquidate or otherwise dispose of (including, without limitation, pursuant to any sale/leaseback transaction) any of its Properties (including, without limitation, the Farmingdale Property or any Collateral), or assign any right to receive income in respect thereof, other than:

(1) sales of inventory in the ordinary course of its business; and

(2) replacement and disposition of equipment in the ordinary course of business.

9.7 **Change in Business**. No Loan Party, or any Subsidiary of any Loan Party, shall engage in any business other than the business engaged in by it on the Closing Date.

9.8 **Change in Credit and Collection Policy**. No Loan Party shall make any material change in the Credit and Collection Policy without the prior written consent of the Lender.

9.9 **Change in Payment Instructions**. No Loan Party shall terminate, or suffer or permit the termination of, any of the Lockboxes or the Lockbox Accounts, or make any change or replacement (1) in the instructions contained in any Notice or otherwise, (2) regarding payments with respect to Receivables to be made to the Lockboxes, the Lockbox Accounts or the other deposit accounts set forth on Schedule III and subject to Control Agreements, (3) in the Standing Revocable Instruction referred to in the Depositary Agreements or otherwise, or (4) regarding payments to be made to the Lender, except upon the prior and express written direction of the Lender.

9.10 **Deviation from Terms of Receivable**. Except in accordance with the Credit and Collection Policy, no Loan Party shall, without the prior written consent of the Lender:

(1) compromise, adjust, extend, satisfy, subordinate, rescind, set off, waive, amend, or otherwise modify, or permit or agree to any deviation from, the terms and conditions of any Receivable or materially or adversely modify or waive any term or condition of any contract related thereto;

(2) (A) amend, modify, supplement or delete in any way or to any extent any provision for uncollectible accounts and free care applicable to any Receivable, or (B) amend, modify or supplement in any way or to any extent any financial category or change in any way or to any extent the manner in which any financial category is treated or reflected in its records;

(3) alter or modify its claims processing system or its third-party billing system, as applicable (except for technical changes of an immaterial nature); or

(4) change, modify, or rescind any direction contained in any invoice or previously delivered Notice.

9.11 **Mergers and Acquisitions; Dissolutions**. No Loan Party or any Subsidiary shall consummate or enter into any transaction or agreement which results or is intended to result in a merger, acquisition, dissolution or wind-up, except any Borrower may merge with and into another Borrower.

9.12 **No "Instruments"**. No Borrower shall take any action which would allow, result in, or cause any Eligible Receivable to be evidenced by an "instrument" within the meaning of the UCC of the applicable jurisdiction.

9.13 **Margin Loan Restrictions**. No portion of the proceeds of any borrowing hereunder shall be used in any manner that might cause the borrowing or the application of such proceeds to violate Regulation U, T, or X of the Board of Governors of the Federal Reserve System or any other regulation of such.

9.14 **Loans or Investments**. Except with respect to loans and investments set forth on Schedule II and transactions permitted by Section 9.15 below, no Loan Party shall make, and no Loan Party shall enter into an agreement to make, any loans to or investments in any Person (other than a Borrower), other than loans and advances for reasonable travel, relocation and business expenses in the

ordinary course of business, so long as (1) all such loans and advances comply with all applicable laws and regulations (including, without limitation, the Sarbanes Oxley Act of 2002 and any successor laws or regulations, as amended from time to time) and (2) the aggregate outstanding amount of all such loans and advances does not exceed $250,000 at any time outstanding during the term of this Agreement.

9.15 **Transactions with Affiliates** . No Loan Party shall sell, transfer, distribute, or pay any money or property, including, but not limited to, any fees or expenses of any nature (including, but not limited to, any fees or expenses for management services), to any Affiliate, or lend or advance money or property to any Affiliate, or invest in (by capital contribution or otherwise) or purchase or repurchase any equity interest or indebtedness, or any Property, of any Affiliate, or become liable under any Guaranty for the obligations of any Affiliate. Notwithstanding the foregoing, the Borrowers may engage in transactions (including trade payable) with Affiliates in the ordinary course of business, in amounts and upon terms fully disclosed to the Lender, and materially no less favorable to the Borrowers than would be obtained in a comparable arm's-length transaction with a third party who is not an Affiliate.

9.16 **Distributions**. (a) Subject to the other terms of this Section 9.16, no Loan Party shall make, or enter into any agreement to make, or enter into any transaction or agreement which results or is intended to result in, any dividends or other Distributions being paid to any Person, except as set forth in clauses (b) and (c) below.

(b) Loan Parties may make one Distribution per fiscal quarter so long as:

(i) (A) the Loan Parties and their Subsidiaries on a consolidated basis have positive net income (calculated before extraordinary items), for the most recently ended fiscal quarter, based on the most recent quarterly income statement filed in Enzo's 10Q; (B) Lender has received a compliance certificate from the Borrower Representative, in form and substance satisfactory to the Lender in its Permitted Discretion, demonstrating and certifying that immediately prior to and after giving pro forma effect to such Distribution (I) no Default or Event of Default exists, is continuing or would occur, and (II) the making of such Distribution would not create a violation of the Maximum Cash Burn Covenant; (C) the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus the positive difference, if any, between the Adjusted Borrowing Limit and the sum of the then Outstanding Balance of the Revolving Loan, is greater than $4,000,000; (D) such Distribution is not being made within 12 months of the date of any exercise of the cure right set forth in Section 10.3 hereof, and (E) to the best of the Loan Parties' knowledge, and based upon the Loan Parties' projected financial information or forward looking statements, the Loan Parties do not anticipate a breach of the Minimum Liquidity Covenant or the Maximum Cash Burn covenant in the next 12 months; or

(ii) (A) Borrowers have received the cash proceeds of the Life Technologies Commercial Tort Claim or any other claim in an amount not less than an amount equal to the Revolving Commitment then in effect; (B) Lender has received a compliance certificate from the Borrower Representative, in form and substance satisfactory to the Lender in its Permitted Discretion, demonstrating and certifying that immediately prior to and after giving pro forma effect to such Distribution (I) no Default or Event of Default exists, is continuing or would occur, and (II) the making of such Distribution would not create a violation of the Maximum Cash Burn Covenant; (C) the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus the

positive difference, if any, between the Adjusted Borrowing Limit and the sum of the then Outstanding Balance of the Revolving Loan, is greater than $4,000,000; (D) such Distribution is not being made within 12 months of the date of any exercise of the cure right set forth in Section 10.3 hereof, and (E) to the best of the Loan Parties' knowledge, and based upon the Loan Parties' projected financial information or forward looking statements, the Loan Parties do not anticipate a breach of the Minimum Liquidity Covenant or the Maximum Cash Burn covenant in the next 12 months.

(c) For any taxable year Axxora may pay cash dividends to Enzo in an aggregate amount equal to the actual federal and state income tax liability of Enzo for such taxable year (or portion thereof) attributable to Axxora's income.

9.17 **Reserved**

9.18 **Subsidiaries**. No Loan Party shall maintain, suffer to exist, create or acquire any Subsidiaries other than those listed on Schedule II.

9.19 **Foreign Deposit Accounts**. No Borrower shall maintain or cause to be maintained any cash or cash equivalents in any Foreign Deposit Account unless such cash or cash equivalents were generated from operations in, or services provided in, the foreign jurisdiction(s) where such accounts are maintained, and Borrowers shall not transfer any cash or cash equivalents from any non-Foreign Deposit Account to any Foreign Deposit Account.

## ARTICLE 10
## FINANCIAL COVENANTS

**UNTIL THE FULL PAYMENT OF ALL LENDER DEBT, THE TERMINATION OF THE REVOLVING COMMITMENT HEREUNDER, THE EACH BORROWER AGREES TO PERFORM AND CAUSE EACH OF THE OTHER LOAN PARTIES TO PERFORM ALL COVENANTS IN THIS ARTICLE 10.**

10.1 **Minimum Liquidity**. The sum of (1) the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus (2) the positive difference, if any, between (A) the Adjusted Borrowing Limit and (B) the sum of the then Outstanding Balance of the Revolving Loan, shall at no time be less than $3,000,000**;**

provided however that commencing the month after any Specified Contribution is made pursuant to Section 10.3 and continuing until satisfaction of the conditions set forth in the last sentence of Section 10.3, the sum of (1) the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus (2) the positive difference, if any, between (A) the Adjusted Borrowing Limit and (B) the sum of the then Outstanding Balance of the Revolving Loan, shall at no time be less than the greater of $4,000,000; provided, further, that Lender may, in its Permitted Discretion, institute a reserve against the Borrowing Base in an amount, determined by Lender in its Permitted Discretion, that will ensure the Loan Parties will satisfy such Minimum Liquidity requirement.

10.2 **Maximum Cash Burn**. The Maximum Cash Burn of Loan Parties and their Subsidiaries on a consolidated basis as of the end of each month, calculated on a trailing 3 month basis, shall not be greater than the amount set forth below for the corresponding month:

| **Month Ending**: | **Maximum Cash Burn:** |
|---|---|
| May 31, 2013 | ($4,500,000) |
| June 30, 2013 | ($3,650,000) |
| July 31, 2013 | ($1,500,000) |
| August 30, 2013 | ($1,200,000) |
| September 30, 2013 | ($1,000,000) |
| October 31, 2013 | ($850,000) |
| November 30, 2013 | ($850,000) |
| December 31, 2013 | ($850,000) |
| January 31, 2014 | ($850,000) |
| February 28, 2014 | ($850,000) |
| March 31, 2014 | ($500,000) |
| April 30, 2014 | ($300,000) |
| May 31, 2014 | ($300,000) |
| June 30, 2014 and each month ending thereafter | $0 |

10.3 **Equity Cure**. Notwithstanding the forgoing, if an Event of Default occurs as a result of Loan Parties' failure to comply with Section 10.2 (a '**Curable Default**"), proceeds (including Prior Equity Raise Proceeds) of equity contributions (in the form of common equity or other equity having terms acceptable to Lender in its reasonable discretion) or proceeds of the Life Technologies Commercial Tort Claim received by Enzo in an amount (the " **Specified Contribution"**) sufficient to, when added to EBITDA as more fully set forth below, cause Loan Parties to be in compliance with Section 10.2, which Specified Contribution is in turn paid directly to Lender after the last day of the month for which such Event of Default occurred but prior to the day that is thirty (30) days after the day on which financial statements are required to be delivered to Lender for such month pursuant to Section 9.5 (the "**Required Contribution Date**"), will, at the written request of Borrower Representative, be included in the calculations of EBITDA solely for the purposes of determining compliance with such financial covenant at the end of such month and any subsequent testing period that includes such month; *provided further that* (a) the minimum amount of any Specified Contribution and the use of proceeds therefrom will be no less than the greater of $500,000 and the amount required to cause Loan Parties to be in compliance with

Section 10.2 (provided that only the portion required to cause Loan Parties to be in compliance with such section shall be added back to EBITDA); (b) all Specified Contributions and the use of proceeds therefrom will be disregarded for all other purposes under this Agreement; (c) there shall be no more than two Specified Contributions made in any twelve month period; (d) the proceeds of all Specified Contributions will be paid to Lender and applied to prepay the Outstanding Balance; and (e) from the date the Curable Default occurred until the date Borrowers pay the Specified Contribution to Lender pursuant to clause (d) above, Lender may institute a reserve under the Adjusted Borrowing Limit in an amount up to the Minimum Liquidity covenant amount then in effect as set forth in Section 10.1 hereof; provided however that Lender agrees that it shall not institute a reserve against the Borrowing Base pursuant to this clause (d) in an amount that would cause the Outstanding Balance to exceed the Adjusted Borrowing Limit at the time such reserve is implemented (provided further that Lender shall not be required to release any reserve to the extent the reserve would cause the Outstanding Balance to exceed the Adjusted Borrowing Limit at any time after implementation of such reserve). Borrower Representative shall deliver to Lender irrevocable written notice of its intent to cure any such Curable Default no later than the date the financial statements for such month are required to be delivered pursuant to Section 9.5, which cure notice shall set forth the calculation of the applicable amount of the Specified Contribution necessary to cure such Curable Default. Upon timely receipt by Lender in cash of the applicable Specified Contribution and application of the Specified Contribution to the Obligations, the applicable Curable Defaults shall be deemed waived. Upon such cure, the Minimum Liquidity covenant will be subject to a heightened compliance level as detailed in section 10.1 until such Maximum Cash Burn covenant set forth in Section 10.2 is met for (3) three consecutive months after the cure is made (but excluding the Specified Contribution from the calculation of EBITDA) in order for the Minimum Liquidity to revert back down to the original Minimum Liquidity covenant level.

## ARTICLE 11
## EVENTS OF DEFAULT

11.1 **Events of Default**. Each of the following will constitute an "**Event of Default**":

(1) Any Borrower fails to pay any principal or interest hereunder or under any of the other Loan Documents, when and as the same shall become due and payable, whether at maturity, by acceleration or otherwise.

(2) Any Borrower shall default in the due and punctual payment of any other payment, fee or expense owing to the Lender pursuant to any of the Loan Documents, when and such amount of payment, fee or expense shall become due and payable, and such default shall continue unremedied for three Business Days.

(3) Any material provision of this Agreement or any other Loan Document shall at any time fail for any reason to be in full force and effect, or this Agreement or any other Loan Document shall terminate, be terminated or become void or unenforceable by the Lender party thereto for any reason whatsoever without the prior written consent of the Lender.

(4) This Agreement shall for any reason fail or cease to create or fail or cease to be a valid and perfected security interest in favor of the Lender in the Receivables, the Collections with respect thereto and the other Collateral, free and clear of all Liens other than Permitted Liens.

(5) Any Loan Party shall default in the performance or observance of any covenant, agreement or provision contained in (A) Section 8.5, 8.6, 8.7, 8.8, 8.9, or 8.10 or Article 4, 5, 9, or 10; or (B) any other Section or Article of this Agreement or any other

Loan Document or in any other instrument or document evidencing or creating any obligation, guaranty or Lien in favor of the Lender in connection with or pursuant to this Agreement or any Lender Debt, and, in the case of any default referred to in this clause (5), that default continues for a period of 15 days after the earlier of (i) the date on which notice of such default is sent to the Borrower Representative by the Lender, and (ii) the date on which any Loan Party discovers such default.

(6) A Revocation Order (as defined in the Depositary Agreement) shall have been sent or any change or replacement shall have been made in the Standing Revocable Instruction (as defined in each of the Depositary Agreements) or any bank (including the Lockbox Bank) at which any deposit account, blocked account, or lockbox account (including the Lockbox Accounts) is maintained shall fail to comply with any of the terms of any deposit account, blocked account, lockbox account or similar agreement (including any Depositary Agreement) to which such bank is a party.

(7) Any representation or warranty made or deemed made by any Loan Party (other than with respect to the eligibility of Receivables as Eligible Receivables hereunder) under or in connection with this Agreement or any other Loan Document or any information or report delivered by any Loan Party pursuant to this Agreement or any other Loan Document shall prove to have been incorrect or untrue in any material respect when made or deemed made or delivered.

(8) Any Loan Party shall fail to pay any principal of or premium or interest on any of its Debt which is outstanding in an aggregate principal amount of at least $500,000 when the same becomes due and payable (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise), and such failure shall continue after the applicable grace period, if any, specified in the agreement or instrument relating to such Debt; or any other event shall occur or condition shall exist under any agreement or instrument relating to any such Debt and shall continue after the applicable grace period, if any, specified in such agreement or instrument, if the effect of such event or condition is to accelerate, or to permit the acceleration of, the maturity of such Debt; or any such Debt shall be declared to be due and payable, or required to be prepaid (other than by a regularly scheduled required prepayment), redeemed, purchased or defeased, or an offer to repay, redeem, purchase or defease such Debt shall be required to be made, in each case prior to the stated maturity thereof.

(9) Any Loan Party shall generally not pay its debts as such debts become due, or shall admit in writing its inability to pay its debts generally, or shall make a general assignment for the benefit of creditors; or any proceeding shall be instituted by or against any Loan Party seeking to adjudicate it a bankrupt or insolvent, or seeking liquidation, winding up, reorganization, arrangement, adjustment, protection, relief, or composition of it or its debts under any law relating to bankruptcy, insolvency or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian or other similar official for it or for any substantial part of its Property and, in the case of any such proceeding instituted against it (but not instituted by it), either such proceeding shall remain undismissed or unstayed for a period of 30 days, or any of the actions sought in such proceeding (including, without limitation, the entry of an order for relief, or the appointment of a receiver, trustee, custodian or other similar official for it or for any substantial part of its Property) shall occur; or any Loan Party shall take any action to institute, initiate or authorize any of the actions set forth above in this clause (9).

(10) As of any date of determination, any Loan Party is found to have been overpaid by Governmental Entities in an amount greater than $300,000 during any period covered by an audit or governmental investigation conducted by CMS or any other federal or state entity and such overpayment is not repaid within 30 days of its due date or reserved for in a manner reasonably acceptable to the Lender.

(11) There shall have occurred any event, or any condition shall exist, which has had or resulted in, or could reasonably be expected to have or result in, a Material Adverse Effect.

(12) Any Loan Party shall have entered into any transaction or agreement which could reasonably be expected to result in a Change of Control; or a Change of Control shall have occurred.

(13) Judgments or orders for payment of money (other than judgments or orders in respect of which adequate insurance is maintained for the full payment thereof) in excess of $500,000 in the aggregate against the Loan Parties, or any of them, remain unpaid, unstayed on appeal, undischarged, unbonded, or undismissed for a period of 30 days or more.

(14) Any of the following occurs: (A) any Borrower is enjoined, restrained or in any way prevented by the order of any court or any Governmental Entity from conducting all or any material part of its business; (B) any Borrower suffers the loss, revocation or termination of any material license, permit, lease or agreement necessary to its business; (C) there is a cessation of any material part of the business of any Borrower; or (D) any Governmental Entity (including, without limitation, the Internal Revenue Service or the PBGC) files a notice of a Lien against any assets of any Loan Party.

(15) Any Loan Party shall fail to discharge within a period of 30 days after the commencement thereof any attachment, sequestration, forfeiture, or similar proceeding or proceedings against any of its Properties.

(16) Any Loan Party shall fail to pay or discharge at or before maturity or before becoming delinquent all lawful claims in excess of $250,000 for labor, material, and supplies, which, if unpaid, might become a Lien upon any material portion of the Property.

(17) An ERISA Event shall have occurred that, when taken together with all other ERISA Events that have occurred, could reasonably be expected to have or result in a Material Adverse Effect.

(18) Any Loan Party is unable to maintain the Transmission interface described in Exhibit V to the commercially reasonable satisfaction of the Lender, or the electronic information servicing capabilities of any Loan Party is not functioning, in either case, for a period of more than three consecutive Business Days; provided however, that in such event Loan Parties shall have the right, upon written notice to Lender, to provide data equivalent to that intended to be covered by the Transmission interface by a reasonable alternative delivery system acceptable to the Lender, including an explanation of the reasons for using alternate delivery.

(19) Except as permitted in clause (18) above, the Borrowers have sent multiple Transmissions to the Lender in a manner that is not in compliance with the specifications set forth in Exhibit V hereof.

11.2 **Events of Default; Remedies**. (a) If any Event of Default shall occur and be continuing, the Lender may, by notice to the Borrower Representative, take any of the following actions: (1) declare the Maturity Date to have occurred and all Lender Debt related thereto shall become immediately due and payable in full; (2) terminate all commitments and obligations of the Lender hereunder; and (3) without limiting any rights hereunder and subject to applicable law, replace the Borrowers in their performance of any or all of its Receivables servicing responsibilities. If an Event of Default under clause (9) of Section 11.1 occurs, the Maturity Date will be deemed to have occurred automatically and without notice and all Lender Debt shall automatically become immediately due and payable and all commitments and obligations of the Lender shall be terminated without any notice or demand of any kind. Upon any such declaration or designation, the Lender shall have, in addition to the rights and remedies which it may have under this Agreement, all other rights and remedies provided after default under the UCC and under other applicable law, which rights and remedies shall be cumulative. The Lender agrees that it will not have any right individually to enforce or seek to enforce this Agreement or any other Loan Document or to realize upon any Collateral for the Lender Debt, it being understood and agreed that such rights and remedies may be exercised only by the Lender in its discretion granted hereunder.

(b) Each Loan Party hereby irrevocably authorizes and instructs the Lender to set-off the full amount of any Lender Debt due and payable against any Collections, any other proceeds of Collateral, or the principal amount of any Revolving Advance requested on or after such due date. No further notification, act or consent of any nature whatsoever is required prior to the exercise by the Lender of such right of set off**.**

11.3 **Attorney-in-Fact**. Each Loan Party hereby irrevocably designates and appoints the Lender, to the extent permitted by applicable law and regulation, as that Loan Party's attorney-in-fact, which irrevocable power of attorney is coupled with an interest, with authority, during the continuance of an Event of Default (and to the extent not prohibited under applicable law and regulations) to do any of the following: (1) endorse or sign such Loan Party's name to remittances, invoices, assignments, checks (other than, absent a court order, payments from Governmental Entities), drafts or other instruments or documents in respect of the Receivables ; (2) notify Insurers to make payments on the Receivables directly to the Lender; and (3) bring suit in such Loan Party's name and settle or compromise such Receivables as the Lender may, in its discretion, deem appropriate.

## ARTICLE 12
## MISCELLANEOUS

12.1 **Amendments**. (a) Subject to the other terms of this Section 12.1, no amendment or waiver of any provision of this Agreement or consent to any departure therefrom by a party hereto will be effective unless in a writing signed by the Lender and the Borrowers, and then such amendment, waiver, or consent will be effective only in the specific instance and for the specific purpose for which given.

(b) No failure on the part of the Lender or the Loan Parties to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right.

(c) The parties hereto agree to make any reasonable change, modification or amendment to this Agreement as may be requested by Fitch, Inc., Moody's Investors Service Inc., or any

other rating agency then rating the receivables financing program of the Lender, so long as any such change, modification or amendment does not materially adversely affect the parties hereto.

12.2 **Notices**. All notices and other communications hereunder shall, unless otherwise stated herein, be in writing (which may include email, facsimile and telephone calls followed by hard copy or facsimile communication and notices and other communications submitted through the HFG Web Portal) and shall be delivered to each applicable party, at the address set forth under its name on Schedule I hereto or at such other address as shall be designated by such party in a notice to the other parties hereto. All notices by the Borrowers to the Lender shall be delivered by an Authorized Officer. Notices and communications submitted through the HFG Web Portal or sent by email and facsimile shall be effective when sent (and shall be immediately followed by hard copy sent by regular mail), and notices and communications sent by other means shall be effective when received. Without in any way limiting the Borrowers' obligation to confirm in writing any telephonic notice of a borrowing or any notice of a borrowing submitted through the HFG Web Portal, the Lender may act without liability upon the basis of telephonic notice or any notice or other communication submitted through the HFG Web Portal believed by the Lender in good faith to be from an Authorized Officer of the Borrowers prior to receipt of separate written confirmation.

12.3 **Assignment; Participations**. (a) This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns; provided, that no Loan Party may assign any of its rights or obligations hereunder or any interest herein without the prior written consent of the Lender.

(b) The Lender may assign, sell, or otherwise transfer to one or more assignees (including, without limitation, one or more investors) all or a portion of its rights and obligations under this Agreement (including all or a portion of its commitments and the advances or loans at the time owing to it); provided however that so long as no Default or Event of Default has occurred and is continuing, any assignment to a Person other than a Permitted Assignee shall be subject to the consent of Borrowing Representative, such consent not to be unreasonably withheld, conditioned or delayed. In the event of any assignment by the Lender to an Affiliate of the Lender (an **"Affiliate Assignee"**), the Lender shall be deemed to act as administrative agent and collateral agent for the applicable Affiliate assignee, and the Lender will retain the sole rights to enforce this Agreement, to approve any amendment, modification, or waiver of any provision of this Agreement, and to receive or collect all payments with respect to the Lender Debt (including payments of interest on the Revolving Loan and payments of fees). By acceptance of any such assignment, each Affiliate Assignee irrevocably appoints the Lender as its administrative and collateral agent for the purposes of administrating the Loans and perfecting the Liens securing the Lender Debt, and authorizes the Lender to take such actions and to exercise such powers on behalf of such Affiliate Assignee as are reasonably necessary or advisable and incidental thereto, including the sole and exclusive authority to: act as disbursing and collecting agent; execute Loan Documents; and act as collateral agent and deal with Collateral and exercise any rights or remedies with respect to any Collateral, including the determination of whether any Receivables constitute Eligible Receivables, or whether to impose or release any reserve. Each Affiliate Assignee agrees that any action taken by the Lender in accordance with the terms of this Agreement or the other Loan Documents, and the exercise by the Lender of its powers set forth herein or therein, together with such other powers that are reasonably incidental thereto, shall be authorized by and binding upon all of the Affiliate Assignees. The Lender's exercise of its discretion in connection with the foregoing matters, if exercised in good faith, shall exonerate the Lender from liability to any Affiliate Assignee or other Person for any error in judgment. The Lender may perform any and all of its duties and exercise its rights and powers by or through any one or more agents appointed by the Lender. The Lender shall not be liable to any Affiliate Assignee for any action taken or omitted to be taken under the Loan Documents, except for losses directly and solely caused by the Lender's gross negligence or willful misconduct and the Lender does not assume

any responsibility for any failure or delay in performance or any breach by any Loan Party of any obligations under the Loan Documents. In the event that a petition seeking relief under Title 11 of the United States Code or any other Federal, state or foreign bankruptcy, insolvency, liquidation or similar law is filed by or against Borrowers, or any of them, any Guarantor, or any other Person obligated under any Loan Document, the Lender is authorized, to the fullest extent permitted by applicable law, to file proofs of claim on behalf of itself and the Affiliate Assignees in such proceeding for the total amount of obligations owed by the Borrowers, or any of them, any Guarantor, or any other Person under any Loan Document.

BY ACCEPTANCE OF ANY SUCH ASSIGNMENT, EACH AFFILIATE ASSIGNEE AGREES TO INDEMNIFY AND HOLD HARMLESS THE LENDER AND ITS AFFILIATES, DIRECTORS, OFFICERS, AGENTS, REPRESENTATIVES, COUNSEL AND EMPLOYEES AND EACH OTHER PERSON, IF ANY, CONTROLLING THEM OR ANY OF THEIR RESPECTIVE AFFILIATES WITHIN THE MEANING OF EITHER SECTION 15 OF THE SECURITIES ACT OF 1933, AS AMENDED, OR SECTION 20(A) OF THE EXCHANGE ACT (COLLECTIVELY, "LENDER INDEMNITEES"), TO THE EXTENT NOT REIMBURSED BY LOAN PARTIES (BUT WITHOUT LIMITING THE INDEMNIFICATION OBLIGATIONS OF THE LOAN PARTIES UNDER ANY DOCUMENTS), ON A PRO RATA BASIS, AGAINST ALL CLAIMS THAT MAY BE INCURRED BY OR ASSERTED AGAINST ANY LENDER INDEMNITEE, PROVIDED THE CLAIM RELATES TO OR ARISES FROM A LENDER INDEMNITEE ACTING AS AN AGENT AS DESCRIBED IN THIS SECTION. In the Lender's discretion, it may reserve for any such claims made against a Lender Indemnitee, and may satisfy any judgment, order, or settlement relating thereto, from proceeds of Collateral prior to making any distribution of Collateral proceeds to Affiliate Assignees. If the Lender is sued by any receiver, bankruptcy trustee, debtor-in-possession or other Person for any alleged preference or fraudulent transfer, then any monies paid by the Lender in settlement or satisfaction of such proceeding, together with all interest, costs and expenses (including attorneys' fees) incurred in the defense of same, shall be promptly reimbursed to the Lender by each Affiliate Assignee to the extent of its Pro Rata Share.

(c) The Lender may, without the consent of the Borrowers, sell participations to one or more banks or other entities (a "**Participant**") in all or a portion of the Lender's rights and obligations under this Agreement (including, if applicable, all or a portion of its commitments and the loans and advances owing to it); provided that (A) the Lender's obligations under this Agreement shall remain unchanged, (B) the Lender shall remain solely responsible to the other parties hereto for the performance of such obligations and (C) the Borrowers shall continue to deal solely and directly with the Lender in connection with all of the Lender's rights and obligations under this Agreement. Any agreement or instrument pursuant to which the Lender sells such a participation shall provide that the Lender shall retain the sole right to enforce this Agreement and to approve any amendment, modification, or waiver of any provision of this Agreement, except that any such agreement or instrument may provide that the Lender will not, without the consent of the Participant, agree to any amendment, modification, or waiver described in Section 12.1 that affects such Participant. Each Borrower agrees, to the fullest extent permitted under applicable law, that each Participant shall be entitled to the benefits of Section 2.5 to the same extent as if it were the Lender. A Participant shall not be entitled to receive any greater payment under Section 2.5 than the Lender would have been entitled to receive with respect to the participation sold to such Participant, unless the sale of the participation to such Participant is made with the Borrowers' prior written consent.

(d) The Lender may at any time pledge or assign a security interest in all or any portion of its rights (and the Collateral) under this Agreement to secure obligations of the Lender, including any pledge or assignment to secure obligations to a Federal Reserve Bank, and this Section 12.3 shall not apply to any such pledge or assignment of a security interest; provided that no such

pledge or assignment of a security interest shall release the Lender from any of its obligations hereunder or substitute any such pledgee or assignee for the Lender as a party hereto.

12.4 **Further Assurances; Financing Statements**. Each Borrower shall, and shall cause its Subsidiaries to, at such Borrower's expense, promptly execute and deliver all further instruments and documents, and take all further action that the Lender may request in its Permitted Discretion, from time to time, as may be necessary or proper in the reasonable opinion of the Lender to carry out more effectively the provisions and purposes of this Agreement and the other Loan Documents, in order to perfect, protect or more fully evidence the assignment as security of the Receivables and the other Collateral, or to enable the Lender to exercise or enforce its rights hereunder and under the other Loan Documents. Without limiting the generality of the foregoing, each Borrower shall, upon the request of the Lender, execute and file such UCC financing or continuation statements, or amendments thereto or assignments thereof, and such other documents or notices, as may be, in the opinion of the Lender, necessary or appropriate. Each Borrower hereby authorizes the Lender to file one or more financing or continuation statements and amendments thereto and assignments thereof, relative to all or any of the Collateral now existing or hereafter arising without such Borrower's signature where permitted by law. If any Borrower fails to perform any of its agreements or obligations under this Agreement, the Lender may (but shall not be required to) itself perform, or cause performance of, such agreement or obligation, and the expenses of the Lender incurred in connection therewith shall be payable by the Borrowers.

12.5 **Costs and Expenses; Collection Costs**. (a) Each Borrower agrees to pay on demand (1) all reasonable and documented non-legal costs and expenses of the Lender in connection with the preparation, execution, delivery, and administration of this Agreement and the Loan Documents; (2) all reasonable and documented costs and out-of-pocket expenses, if any (including reasonable counsel fees and expenses), of the Lender in connection with any waiver, modification, supplement, or amendment hereto, (3) all costs and out of pocket expenses of the Lender in connection with any action to collect, enforce, protect, maintain, preserve or foreclose its interests with respect to any Loan Document or Collateral and (4) any and all wire fees for each wire initiated by the Lender to or for the benefit of any Borrower.

(b) Each Borrower further agrees to pay on the Closing Date and thereafter on demand (1) subject to and in accordance with Section 8.4 hereof, all reasonable costs and expenses incurred by the Lender in connection with periodic audits of the Collateral (including the Receivables, books and records, accounting, financial and general business matters of each Borrower; (2) all reasonable costs and expenses incurred by the Lender to accommodate any significant coding or data system changes made by any Borrower that would affect the transmission or interpretation of data received through the interface; (3) all reasonable costs and expenses incurred by the Lender resulting from a lack of either cooperation or responsiveness of any Borrower to agreed-upon protocol and schedules; provided, that such Borrower has been informed of the alleged lack of cooperation or responsiveness and has been provided with a reasonable period of time to correct such problems; and (4) all successor and substitute servicing costs.

(c) Without limiting the generality of the foregoing, the expenses, costs, charges and fees referred to in this Section 12.5 may include the following: recording costs, appraisal costs, paralegal fees, costs and expenses; accountants' fees, costs and expenses; court costs and expenses; photocopying and duplicating expenses; court reporter fees, costs and expenses; long distance telephone charges; air express charges; telegram charges; telecopier charges; secretarial overtime charges; and expenses for travel, lodging and food.

12.6 **Confidentiality**. Each of the parties hereto hereby acknowledges that this Agreement and the other Loan Documents (including, without limitation, any information relating to the Borrowers or

any member of the Lender Group) contain confidential and proprietary information. Unless otherwise required by applicable law, each of the parties hereto hereby agrees to maintain the confidentiality of this Agreement (and all drafts, memos and other documents delivered in connection herewith including, without limitation, any information relating to the Borrowers or any member of the Lender Group delivered hereunder) in communications with third parties and otherwise and to take all reasonable actions to prevent the unauthorized use or disclosure of and to protect the confidentiality of such confidential information, except that such confidential information may be disclosed (in accordance with applicable laws) to (1) the Borrowers' legal counsel, accountants and investors; (2) each member of the Lender Group, investors in and creditors of the Lender, or the Lender, appropriate rating agencies with respect to such Persons, and each of their respective legal counsel and auditors; (3) any assignee or Participant or potential assignee or Participant that has agreed to comply with this Section 12.6 (and any such assignee or Participant or potential assignee or Participant may disclose such information to Persons employed or engaged by them as described in clause (2) above); (4) any Person, if such information otherwise becomes available to such Person or publicly available through no fault of any party governed by this Section 12.6; (5) any Governmental Entity requesting such information; and (6) any other Person with the written consent of each affected party, which consent shall not be unreasonably withheld except with the consent of the Lender. Each member of the Lender Group hereby agrees to, and shall take reasonable steps to cause each other member of the Lender Group to, comply with all applicable laws (including the provisions set forth in the Business Associate Agreement) regarding confidential patient information, if any, it receives in connection with the transactions described in this Agreement.

12.7 **Term and Termination; Fees**. (a) This Agreement shall have an initial term commencing on the Closing Date and expiring on the Scheduled Maturity Date (the "**Initial Term**"). Thereafter, the term of this Agreement with respect to the Revolving Loan and Revolving Commitment shall be automatically extended for annual successive terms (each a "**Renewal Term**") commencing on the first day following the Initial Term or a Renewal Term, as the case may be, and expiring on the date twelve months thereafter, unless the Lender or the Borrowers provide notice not less than 30 days prior to the expiration of the Initial Term or a Renewal Term, as the case may be, that such Person does not intend to extend the term of this Agreement.

(b) The obligations of the Lender under this Agreement shall continue in full force and effect from the Closing Date until the Maturity Date.

(c) If the Revolving Commitment is reduced or terminated or the Revolving Loan becomes due and payable prior to the scheduled end of the Term (including by reason of an Event of Default), the Borrowers shall pay to the Lender the Early Termination Fee, if any; provided however that if the Revolving Commitment is reduced or terminated as a result of a Lender Default, then Borrowers shall not be required to pay the Early Termination Fee if the Lender Default is continuing at the time the Revolving Commitment is terminated and the Lender Debt is Fully Paid.

(d) The termination of this Agreement shall not affect any rights of the Lender or any obligations of the Borrowers arising on or prior to the effective date of such termination, and the Borrowers' duties and obligations hereunder shall continue to be fully operative until the Full Payment of all Lender Debt (including, without limitation, all Lender Debt incurred on or prior to such termination).

(e) The Liens and rights granted to the Lender hereunder shall continue in full force and effect, notwithstanding the termination of this Agreement, until the Full Payment of all Lender Debt. Upon the termination of all commitments and obligations of the Lender and the Full Payment of all Lender Debt in cash, the Lender shall, at the Borrowers' sole cost and expense, execute and deliver such documents as the Borrower Representative shall reasonably request to evidence such termination.

(f) All indemnities of each Borrower contained herein shall survive termination hereof unless otherwise provided. In furtherance and not in limitation of the foregoing, if after receipt of any payment of all or any part of the Lender Debt, the Lender is for any reason compelled to surrender such payment to any Person or entity because such payment is determined to be void or voidable as a preference, an impermissible setoff, a diversion of trust funds or for any other reason, this Agreement shall continue in full force (except that the Revolving Commitment shall have been terminated), and each Borrower shall be liable to, and shall indemnify and hold the Lender harmless for the amount of such payment surrendered until the Lender shall have been finally and irrevocably paid in full in cash. The provisions of the foregoing sentence shall be and remain effective notwithstanding any contrary action which may have been taken by the Lender in reliance upon such payment, and any such contrary action so taken shall be without prejudice to the Lender's rights under this Agreement and will be deemed to have been conditioned upon such payment having become final and irrevocable.

12.8 **No Liability**. Neither this Agreement nor any document executed in connection herewith shall constitute an assumption by the Lender of any obligation to any Obligor or any patient or customer of any Borrower. Notwithstanding any other provision herein, no recourse under any obligation, covenant, agreement or instrument of the Lender contained herein or with respect hereto shall be had against any Related Person whether arising by breach of contract, or otherwise at law or in equity (including any claim in tort), whether express or implied, it being understood that the agreements and other obligations of the Lender herein and with respect hereto are solely its corporate obligations; provided, however, nothing herein shall operate as a release of any liability which may arise as a result of such Related Person's gross negligence or willful misconduct.

12.9 **Entire Agreement; Severability**. This Agreement, including all exhibits and schedules hereto and the other Loan Documents, embody the entire agreement and understanding of the parties concerning the subject matter contained herein. This Agreement supersedes any and all prior agreements and understandings between the parties, whether written or oral. If any provision of this Agreement shall be declared invalid or unenforceable, the parties hereto agree that the remaining provisions of this Agreement shall continue in full force and effect.

12.10 **Governing Law**. THIS AGREEMENT, AND ALL MATTERS ARISING OUT OF OR RELATING TO THIS AGREEMENT, SHALL, IN ACCORDANCE WITH SECTION 5-1401 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK, BE GOVERNED BY THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO ANY CONFLICTS OF LAWS PRINCIPLES THEREOF THAT WOULD CALL FOR THE APPLICATION OF THE LAWS OF ANY OTHER JURISDICTION, EXCEPT TO THE EXTENT THAT THE VALIDITY OR PERFECTION OF THE SECURITY INTERESTS GRANTED HEREUNDER, OR REMEDIES RELATED THERETO, IN RESPECT OF ANY PARTICULAR COLLATERAL ARE GOVERNED BY THE LAWS OF A JURISDICTION OTHER THAN THE STATE OF NEW YORK.

12.11 **Waiver of Jury Trial, Jurisdiction, and Venue**. EACH OF THE PARTIES HERETO HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY IN THE EVENT OF ANY LITIGATION WITH RESPECT TO ANY MATTER RELATED TO THIS AGREEMENT, AND HEREBY IRREVOCABLY CONSENTS TO THE JURISDICTION OF THE STATE AND FEDERAL COURTS LOCATED IN NEW YORK CITY, NEW YORK COUNTY, NEW YORK, IN CONNECTION WITH ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT. IN ANY SUCH LITIGATION, EACH OF THE PARTIES HERETO WAIVES PERSONAL SERVICE OF ANY SUMMONS, COMPLAINT OR OTHER PROCESS AND AGREES THAT SERVICE THEREOF MAY BE MADE BY CERTIFIED OR REGISTERED MAIL DIRECTED TO THE PARTIES HERETO AT THEIR ADDRESSES SET FORTH ON SCHEDULE I HERETO.

12.12 **Execution in Counterparts**. This Agreement may be executed in counterparts, each of which when so executed will be deemed to be an original and all of which when taken together will constitute one and the same agreement.

12.13 **No Proceedings**. Each Loan Party hereby agrees that it will not institute against the Lender any proceeding of the type referred to in clause (9) of Section 11.1 so long as any senior indebtedness issued by the Lender shall be outstanding or there shall not have elapsed one year plus one day since the last day on which any such senior indebtedness shall have been outstanding.

12.14 **Confidentiality and Notices**. Each Loan Party hereby grants the Lender the right to place one or more advertisements in newspapers and journals, on its website and in its other materials (all, at its own expense) that recites the transaction hereunder, the amount of such transaction and utilizes the corporate logo of the Loan Parties.

12.15 **Accounting Information**. Each Borrower hereby authorizes the Lender to discuss the financial condition of the Borrowers, or any of them, with their independent public accountants and agrees that such discussion or communication shall be without liability to such Person or the independent public accountants (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such information and instructed to keep all information on substantially the same terms as provided herein).

12.16 **HFG Web Portal**. The Lender may, but will not be required to, establish and make available to the Borrowers, and each Borrower hereby authorizes the Lender to establish make available to the Borrowers, a secure website, FTP site, or other Internet interface accessible only by the Lender and the Borrowers (and separate from the computer interface or FTP site used for Transmissions) through which Borrower may access certain account information relating to the Revolving Loan and this Agreement (that secure website, FTP site, or other Internet interface, the "**HFG Web Portal**"). The HFG Web Portal, if established and made available to the Borrowers, will be provided "as is" and "as available." The Lender does not warrant the adequacy of the HFG Web Portal for any particular purpose and expressly disclaims liability for errors or omissions in any information provided through the HFG Web Portal. No warranty of any kind, express, implied, or statutory, including, without limitation, any warranty of merchantability, fitness for a particular purpose, non-infringement of third-party rights, or freedom from viruses or other code defects, is made by the Lender in connection with the HFG Web Portal. In no event will the Lender or any of its Related Persons have any liability to any Borrower or any other Person for damages of any kind, including, without limitation, direct or indirect, special, incidental, or consequential damages, losses, or expenses (whether in tort, contract, or otherwise) arising out of the Lender's establishing the HFG Web Portal or making the HFG Web Portal available to the Borrowers or out of the Borrower's use of the HFG Web Portal. All information provided through the HFG Web Portal, including, without limitation, all HFG Web Portal Communications, shall remain subject in all respects to the terms and conditions of this Agreement.

12.17 **USA PATRIOT Act** . Each Borrower acknowledges and consents that, in accordance with the reporting requirements of the USA PATRIOT Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)) (the "**Act**"), the Lender may require, obtain, verify and record information that identifies such Borrower, which information includes the name and addresses of such Borrower and its principals, as well as any other information that will allow the Lender to identify such Borrower and its principals in accordance with, and otherwise comply with the requirements of, the Act.

12.18 **Nature and Extent of Each Loan Party's Liability**.

(a) *Joint and Several Liability*. Each Loan Party agrees that it is jointly and severally liable for, and absolutely and unconditionally guarantees to the Lender the prompt Full Payment of all Lender Debt and the prompt performance of all agreements under the Loan Documents. Each Loan Party agrees that its obligations hereunder constitute continuing obligations, that such obligations shall not be discharged until the Full Payment of all Lender Debt, and that such obligations are absolute and unconditional, irrespective of, and will not be discharged, impaired, or affected by: (i) the genuineness, validity, regularity, enforceability, subordination or any future modification of, or change in, any Lender Debt or Loan Document, or any other document, instrument or agreement to which any Loan Party is or may become a party or be bound, or the power or authority or lack thereof of any other Loan Party to incur its obligations; (ii) the absence of any action to enforce this Agreement (including this Section 12.18) or any other Loan Document, or any waiver, consent or indulgence of any kind by the Lender with respect thereto; (iii) the existence, value or condition of, or failure to perfect a Lien or to preserve rights against, any security or guaranty for the Lender Debt or any action, or the absence of any action, by the Lender in respect thereof (including the release of any security or guaranty); (iv) the insolvency of any Loan Party; (v) the payment in full of all of the Lender Debt at any time or from time to time, except the Full Payment of all Lender Debt; (vi) the existence or non-existence of any Loan Party as a legal entity; (vii) any transfer by any Loan Party of all or any part of any Collateral; (viii) any statute of limitations affecting the liability of any other Loan Party hereunder or under any of the other Loan Documents or the ability of the Lender to enforce this Agreement, this Section 12.18, or any other provision of any Loan Document; (ix) any right of offset, counterclaim or defense of any Loan Party, including those that have been waived by the Loan Parties pursuant to this Section 12.18; (x) any election by the Lender in a bankruptcy proceeding for the application of Section 1111(b)(2) of Title 11 of the United States Code; (xi) any borrowing or grant of a Lien by any other Loan Party, as debtor-in-possession under Section 364 of Title 11 of the United States Code or otherwise; (xii) the disallowance of any claims of the Lender against any Loan Party for the repayment of any Lender Debt under Section 502 of Title 11 of the United States Code or otherwise; or (xiii) any other action or circumstances that might otherwise constitute a legal or equitable discharge or defense of a surety or guarantor, except Full Payment of all Lender Debt.

(b) *Permitted Actions*. Except as otherwise expressly provided by this Agreement, the Lender may from time to time, in its sole discretion and without notice to any Loan Party, take any or all of the following actions: (i) retain or obtain a Lien in any asset of any Loan Party or any other Person to secure any of the Lender Debt; (ii) retain or obtain the primary or secondary obligation of any obligor or obligors, in addition to the Loan Parties, with respect to any of the Lender Debt; (iii) extend or renew for one or more periods (whether or not longer than the original period), or, with the agreement of the Borrowers, alter or exchange any of the Lender Debt; (iv) waive, ignore, or forbear from taking action or otherwise exercising any of its default rights or remedies with respect to any default by the Loan Parties under the Loan Documents; (v) release, waive, or compromise any obligation of the Loan Parties hereunder or any obligation of any nature of any other obligor primarily or secondarily obligated with respect to any of the Lender Debt; (vi) release Lender's Liens in, or surrender, release or permit any substitution or exchange for, all or any part of the Collateral now or hereafter securing any of the Lender Debt or any obligation hereunder, or extend or renew for one or more periods (whether or not longer than the original period) or release, waive, compromise, alter or exchange any obligations of any nature of any Loan Party with respect to any such property; and (vii) demand payment or performance of any of the Lender Debt from any Loan Party at any time or from time to time, whether or not the Lender has exercised any of its rights or remedies with respect to any property securing any of the Lender Debt or any obligation hereunder or proceeded against any other Loan Party or other Person primarily or secondarily liable for payment or performance of any of the Lender Debt.

(c) *Waivers*.

(i) Each Loan Party expressly waives, to the extent not prohibited by applicable law, and except to the extent otherwise expressly required pursuant to this Agreement: (1) in the case of a Guarantor, all rights to revoke its guaranty pursuant to this Section 12.18 at any time; (2) notice of the acceptance by the Lender; (3) notice of the existence, creation, payment, nonpayment, performance or nonperformance of all or any of the Lender Debt; (4) presentment, demand, notice of dishonor, protest, notice of protest and all other notices whatsoever with respect to the payment or performance of the Lender Debt or the amount thereof or any payment or performance by the Loan Parties hereunder; (5) all diligence in collection or protection of or realization upon the Lender Debt or any thereof, any obligation hereunder or any security for or guaranty of any of the foregoing; (6) any right to direct or affect the manner or timing of the Lender's enforcement of its rights or remedies; (7) any and all defenses that would otherwise arise upon the occurrence of any event or contingency described in Sections 12.18(a) or (b) or upon the taking of any action by the Lender permitted hereunder; and (8) all other principles or provisions of law, if any, that conflict with the terms of this Section 12.18, including the effect of any circumstances that may or might constitute a legal or equitable discharge of a guarantor or surety;

(ii) Each Loan Party expressly waives all rights that it may have now or in the future under any statute, at common law, in equity or otherwise, to compel the Lender to marshal assets or to proceed against any Loan Party, other Person or security for the payment or performance of any Lender Debt before, or as a condition to, proceeding against such Loan Party.

(iii) The Lender may, in its discretion, pursue such rights and remedies hereunder, under the other Loan Documents and under applicable law as it deems appropriate, including realization upon Collateral by judicial foreclosure or non-judicial sale or enforcement, without affecting any rights and remedies under this Section 12.18. If, in the exercise of any rights or remedies, the Lender forfeits any of its rights or remedies, including its right to enter a deficiency judgment against any Loan Party or any other Person, whether because of any applicable laws pertaining to "election of remedies" or otherwise, each Loan Party consents to such action by the Lender and waives any claim based upon such action, even if the action may result in loss of any rights of subrogation that any Loan Party might otherwise have had but for such action.

(iv) If the Lender bids at any foreclosure or trustee's sale or at any private sale, the Lender may bid all or a portion of the Lender Debt and the amount of such bid need not be paid by the Lender but shall be credited against the Lender Debt. The amount of the successful bid at any such sale, whether the Lender or any other Person is the successful bidder, shall be conclusively deemed to be the fair market value of the Collateral, and the difference between such bid amount and the remaining balance of the Lender Debt shall be conclusively deemed to be the amount of the Lender Debt guaranteed under this Section 12.18, notwithstanding that any present or future law or court decision may have the effect of reducing the amount of any deficiency claim to which the Lender might otherwise be entitled but for such bidding at any such sale.

(v) It is agreed among each Loan Party and the Lender that the provisions of this Section 12.18 are of the essence of the transaction contemplated by the Loan

Documents and that, but for such provisions, the Lender would decline to make the Revolving Loan. Each Loan Party acknowledges that its waivers pursuant to this Section 12.18 are necessary to the conduct and promotion of its business, and can be expected to benefit such business.

(d) *Extent of Liability.* Notwithstanding any provision herein contained to the contrary, each Loan Parties' liability under this Section 12.18 shall be limited to an amount not to exceed as of any date of determination the greater of:

(i) the net amount of all proceeds of the Revolving Loan directly or indirectly loaned or otherwise transferred to, or incurred for the benefit of, such Loan Party (including, without limitation, the net amount of all proceeds of the Revolving Advances directly or indirectly re-loaned or otherwise transferred to, or incurred for the benefit of, such Loan Party), *plus* interest and fees thereon at the applicable rate specified in this Agreement; or

(ii) the amount that could be claimed by the Lender from such Loan Party under this Section 12.18 without rendering such claim voidable or avoidable under Section 548 of Chapter 11 of Title 11 of the United States Code or under any applicable state Uniform Fraudulent Transfer Act, Uniform Fraudulent Conveyance Act or similar statute or common law after taking into account, among other things, such Loan Parties' right of contribution and indemnification from each other Loan Party hereunder.

(e) *Rights of Contribution.* To the extent that any Loan Party shall make a payment under this Section 12.18 of all or any of the Lender Debt (each a "**Loan Party Payment**") which, taking into account all other Loan Party Payments then previously or concurrently made by the other Loan Parties, exceeds the amount which such Loan Party would otherwise have paid if each Loan Party had paid the aggregate guaranteed Lender Debt satisfied by such Loan Party Payment in the same proportion that such Loan Parties' "Allocable Amount" (as defined below) (in effect immediately prior to such Loan Party Payment) bore to the aggregate Allocable Amounts of all of Loan Parties in effect immediately prior to the making of such Loan Party Payment, then, following the Full Payment of all Lender Debt, such Loan Party shall be entitled to receive contribution and indemnification payments from, and be reimbursed by, each of the other Loan Parties for the amount of such excess, pro rata based upon their respective Allocable Amounts in effect immediately prior to such Loan Party Payment. As of any date of determination, the "**Allocable Amount**" of any Loan Party shall be equal to the maximum amount of the claim that could then be recovered from such Loan Party under this Section 12.18 without rendering such claim voidable or avoidable under Section 548 of Chapter 11 of Title 11 of the United States Code or under any applicable state Uniform Fraudulent Transfer Act, Uniform Fraudulent Conveyance Act or similar statute or common law. This Section 12.18(e) is intended only to define the relative rights of the Loan Parties and nothing set forth in this Section 12.18 is intended to or shall impair the obligations of Loan Parties, jointly and severally, to pay any amounts as and when the same shall become due and payable in accordance with the terms of this Section 12.18. The rights of the parties under this Section 12.18(e) shall only be exercisable upon the Full Payment of all Lender Debt. The parties hereto acknowledge that the rights of contribution and indemnification hereunder shall constitute assets of any Loan Party to which such contribution and indemnification is owing.

(f) *Joint Enterprise*. Each Loan Party has requested that the Lender make this credit facility available to the Loan Parties on a combined basis, in order to finance the Loan Parties' business most efficiently and economically. The Loan Parties' business is a mutual and collective enterprise.

(g) *Subordination*. Each Loan Party hereby irrevocably subordinates any claims, including any rights at law or in equity to payment, subrogation, reimbursement, exoneration, contribution, indemnification or set off, that it may have at any time against any other Loan Party, howsoever arising, to the Full Payment of all Lender Debt.

(h) *Subrogation*. No Loan Party will exercise any rights that such Loan Party may acquire by way of subrogation under this Section 12.18, by any payment hereunder or otherwise, until Full Payment of all Lender Debt and the Lender shall have no further obligations to the Loan Party under the Loan Documents or otherwise. If any amount shall be paid to any Loan Party on account of such subrogation rights at any other time, such amount shall be held in trust for the benefit of the Lender and shall be forthwith paid to the Lender to be credited and applied to the Lender Debt, whether matured or unmatured, in such manner as the Lender shall determine.

12.19 **Inter-Borrower Provision**. Each Loan Party acknowledges that it will enjoy significant benefits from the business conducted by the Borrowers (regardless of whether or not such Borrower actually receives any of the proceeds of the Revolving Loan) because of, inter alia, their combined ability to bargain with other Persons including, without limitation, their ability to receive the credit facility on favorable terms granted by this Agreement and the other Loan Documents which would not have been available to an individual Borrower acting alone. Each Loan Party has determined that it is in its best interest to procure the credit facility which each Borrower may utilize directly and which received the credit support of the other Borrower as contemplated by this Agreement and the other Loan Documents.

12.20 **Appointment of Borrower Representative**. (a) Each Borrower hereby designates Borrower Representative as its representative and agent on its behalf for the purposes of issuing Borrowing Base Reports, and giving instructions with respect to the disbursement of the proceeds of the Revolving Advances, giving and receiving all other notices and consents hereunder or under any of the other Loan Documents and taking all other actions (including in respect of compliance with covenants) on behalf of any Borrower or Borrowers under the Loan Documents. Borrower Representative hereby accepts such appointment. Notwithstanding anything to the contrary contained in this Agreement, no Borrower other than Borrower Representative shall be entitled to take any of the foregoing actions. The proceeds of each Revolving Advance made hereunder shall be advanced to or at the direction of Borrower Representative; provided, however, at no time shall Borrower Representative or any other Borrower permit the outstanding Revolving Advances actually advanced to a Borrower and used in its business exceed the Eligible Receivables of such Borrower.

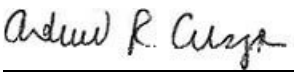
(b) The Lender may regard any notice or other communication pursuant to any Loan Document from Borrower Representative as a notice or communication from all Borrowers, and may give any notice or communication required or permitted to be given to any Borrower or all Borrowers hereunder to Borrower Representative on behalf of such Borrower or all Borrowers. Each Borrower agrees that each notice, election, representation and warranty, covenant, agreement and undertaking made on its behalf by Borrower Representative will be deemed for all purposes to have been made by such Borrower and shall be binding upon and enforceable against such Borrower to the same extent as if the same had been made directly by such Borrower.

[*REMAINDER OF PAGE INTENTIONALLY LEFT BLANK*]

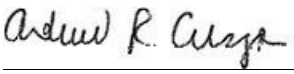
The parties are signing this Revolving Loan and Security Agreement as of the date stated in the preamble.

**BORROWERS:**

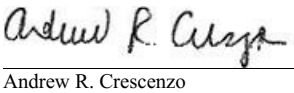
**ENZO BIOCHEM, INC.**

By: 
Name: Andrew R. Crescenzo
Title: Vice President

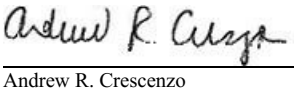
**ENZO CLINICAL LABS, INC.**

By: 
Name: Andrew R. Crescenzo
Title: Vice President

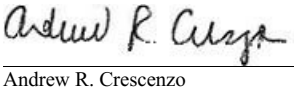
**ENZO LIFE SCIENCES, INC.**

By: 
Name: Andrew R. Crescenzo
Title: Vice President

**AXXORA, LLC**

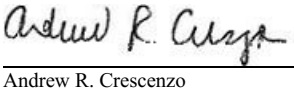
By: 
Name: Andrew R. Crescenzo
Title: Vice President

**ENZO REALTY LLC**

By: 
Name: Andrew R. Crescenzo
Title: Vice President

**GUARANTOR:**

**ENZO THERAPEUTICS, INC.**

By: 
Name: Andrew R. Crescenzo
Title: Vice President

The parties are signing this Revolving Loan and Security Agreement as of the date stated in the preamble.

**LENDER:**

**HEALTHCARE FINANCE GROUP, LLC,**
as the Lender

By: 
Name: Alan G. Regdos II
Title: Senior Vice President

EXHIBIT I
ELIGIBILITY CRITERIA

EXHIBIT I
ELIGIBILITY CRITERIA

The following shall constitute the eligibility criteria for acceptance of Receivables for financing and inclusion in the Borrowing Base under the Agreement (the "**Eligibility Criteria**"):

I. General Eligibility Criteria for all Receivables:

(1) The information provided by any Borrower with respect to each such Receivable is complete and correct and all documents, attestations, and agreements relating thereto that have been delivered to the Lender are true and correct.

(2) All information set forth in the bill and supporting claim documents with respect to such Receivable is true, complete and correct in all material respects; if additional information is requested by the Obligor, the Borrowers have or will promptly provide the same, and if any error has been made with respect to such information, the Borrowers will promptly correct the same and, if necessary, rebill such Receivable.

(3) Except with respect to Unbilled Receivables, Borrowers have billed the applicable Obligor within 30 days of the Last Service or shipment Date and has delivered to such Obligor all requested supporting claim documents with respect to such Receivable and no amounts with respect to such Receivable have been paid as of the date and time of the inclusion of such Receivable in the Borrowing Base. The Borrowers have, or have the right to use, valid identification numbers and licenses to generate valid Receivables.

(4) As to Medicare and Medicaid, there is no basis for any Governmental Entity to assert an offset with respect to such Receivable against any or all Borrowers.

(5) Each such Receivable (A) is payable in an amount not less than its Expected Net Value, by the Obligor or Obligors identified by a Borrower in its records as being obligated to do so, (B) is based on an actual and bona fide rendition of services or sale of goods to the patient by a Borrower in the ordinary course of business, (C) is denominated and payable only in U.S. dollars in the United States, (D) is an account or general intangible within the meaning of the UCC of the state in which such Borrower is incorporated or formed, and is not evidenced by any instrument or chattel paper, (E) is net of any contractual allowances, deductible limitations, commissions, fees, or other discounts, (F) does not cover any treatment for alcohol, drug or substance abuse, workers' compensation claims or personal injury claims and (G) satisfies all applicable requirements of, and was originated and processed in accordance with, the billing and collection requirements of the applicable Obligor. There are no payors other than the Obligor or Obligors identified in the Borrowers' records as the payors primarily liable on such Receivable.

(6) Each such Receivable (A) is not the subject of any action, suit, proceeding or dispute (pending or threatened), setoff, counterclaim, defense, abatement, suspension, deferment, deductible, reduction or termination by the Obligor thereof (except for statutory rights of Governmental Entities that are not pending or threatened), (B) is not within 15 days of the statutory limit for collection applicable to the Obligor thereof, and (C) except as set forth below, is not aged more than, 120 days after the Last Service Date.

(7) Each such Receivable is not due from any Governmental Entity based on any cost report settlement or expected settlement.

(8) No Borrower has any Guaranty of, letter of credit providing credit support for, or collateral security for, such Receivable, other than any such guaranty, letter of credit or collateral security as has been assigned to the Lender, and any such guaranty, letter of credit or collateral security is not subject to any Lien in favor of any other Person.

(9) To the Borrowers' knowledge, the goods and services constituting the basis for such Receivable were medically necessary for the customer or patient, and the customer or patient has received such goods and services.

(10) The fees charged for the goods and services constituting the basis for such Receivable are consistent with the usual, customary, and reasonable fees charged by other similar medical providers for the same or similar goods in the Borrowers' community and in the community in which the patient resides.

(11) The Obligor with respect to each such Receivable (A) is not currently the subject of any bankruptcy, insolvency or receivership proceeding, nor is it unable to make payments on its obligations when due, (B) is located in the United States of America and is not organized under the laws of any jurisdiction outside the United States, (C) is not a subsidiary, parent or other Person that is an Affiliate of any Borrower, (D) is not the Obligor of any Receivable that was a Defaulted Receivable in the past 12 months, and (E) is an Insurer with a credit quality acceptable to the Lender or a Governmental Entity. For purposes hereof, "**Defaulted Receivable**" means a Receivable as to which the Obligor thereof or any other Person obligated thereon has taken any action, or suffered any event to occur, of the type described in clause (9) of Section 11.1.

(12) The financing of such Receivables hereunder is made in good faith and without actual intent to hinder, delay or defraud present or future creditors of any Borrower.

(13) Any insurance policy, contract or other instrument obligating an Obligor to make payment with respect to such Receivable (A) does not contain any provision prohibiting the grant of a Lien in such payment obligation from the patient to the Borrowers, or from the Borrowers to the Lender, (B) has been duly authorized and, together with such Receivable, constitutes the legal, valid and binding obligation of the Obligor in accordance with its terms, (C) together with such Receivable, does not contravene in any material respect any requirement of law applicable thereto, and (D) was in full force and effect and applicable to the customer or patient at the time the goods or services constituting the basis for such Receivable were sold or performed.

(14) The insurance policy, contract or other instrument obligating a Governmental Entity to make payment with respect to such Receivable (A) has been duly authorized and, together with the applicable Receivable, constitutes the legal, valid and binding obligation of the Governmental Entity in accordance with its terms, (B) together with the applicable Receivable, does not contravene in any material respect any requirement of law applicable thereto, and (C) was in full force and effect and applicable to the customer or patient at the time the goods or services constituting the basis for such Receivable were sold or performed.

(15) No consents by any third party to the grant of a security interest in such Receivable are required other than consents previously obtained in writing by the Borrowers, a copy of each such consent having been provided to the Lender.

(16) The inclusion of such Receivable in the Borrowing Base would not increase the total aggregate gross value of all Receivables in the Borrowing Base for any Obligor (or group of Obligors) listed

below, as a percentage of the total aggregate gross value of Receivables of all Obligors in the Borrowing Base, above the corresponding percentages listed below:

| Obligor | Maximum Eligibility |
|---|---|
| Medicare | **30%** |
| Medicaid | **5%** |
| Blue Cross/Blue Shield | **25%** |
| All Commercial Insurance Obligors, HMOs, and PPOs | **90%** |
| any single AAA rated (non-governmental) Obligor | **35%** |
| any single AA rated (non-governmental) Obligor | **35%** |
| any single A rated (non-governmental) Obligor | **25%** |
| any single BBB rated (non-governmental) Obligor | **15%** |
| any single unrated (non-governmental) Obligor | **10%** |

(17) Unless specifically verified by the Borrowers and accepted by the Lender, the Expected Net Value of each Eligible Receivable is in an amount not in excess of $300,000.

(18) No Lien which is still in effect on the applicable Funding Date has been made with respect to or granted in any such Receivable except for the Lien in favor of the Lender.

(19) Each such Receivable, regardless of whether otherwise eligible, is not due from an Obligor if 50% or more of the total amount of Receivables due from such Obligor are not Eligible Receivables.

(20) Such Receivables are not owing to Enzo Therapeutics.

II. Specific Eligibility Criteria for Enzo Labs Receivables:

(1) Each such Receivable (a) is not aged more than 150 days after the Last Service Date and (b) with respect to Unbilled Receivables, not more than 30 days have elapsed since the Last Service Date.

(2) If the percentage of Eligible Receivables aged over 120 days at any point in time is greater than 15% of the total Eligible Receivables, the dollar amount of Eligible Receivables over the aforementioned percentage will not be considered Eligible Receivables.

III. Specific Eligibility Criteria for Enzo Life Sciences and Axxora Receivables:

(1) A Borrower has billed the applicable Obligor for such Enzo Life Sciences and Axxora Receivables.

(2) Such Enzo Life Science and Axxora Receivable (i) is evidenced by an invoice, statement, or other electronic or documentary evidence reasonably satisfactory to Lender, (ii) is not aged more than 120 days from the date of shipment, (iii) has not been turned over or submitted to a third party for collection, and (iv) is stated at its Expected Net Value.

(3) If the percentage of Enzo Life Sciences and Axxora Eligible Receivables aged over 90 days at any point in time is greater than 10% of the total Enzo Life Sciences and Axxora Eligible Receivables, the dollar amount of Enzo Life Sciences and Axxora Eligible Receivables over the aforementioned percentage will not be considered Enzo Life Sciences and Axxora Eligible Receivables.

EXHIBIT II
FORM OF BORROWING BASE REPORT

HEALTHCARE FINANCE GROUP, LLC
BORROWING BASE REPORT

Report submission date: **[*]**
As of date: **[*]**

| | | |
|---|---|---|
| I. | Gross Receivables Balance as of: **[*]** | |
| II. | Deductions to Gross Receivables: | |
| | Ineligible Receivables | |
| | Cross-aged Balances | |
| | Other Ineligibles | |
| | Total Ineligible A/R | |
| III. | Gross Eligible Receivables as of: **[*]** | |
| IV. | Net Value Factor | % |
| V. | Expected Net Value | |
| VI. | Additions to Expected Net Value | |
| | Expected Net Value of New Receivables | |
| | Adjustments | |
| VII. | Deductions to Expected Net Value | |
| | Collections | |
| | Aged Claims | |
| | Deferred Revenue | |
| | Unapplied Cash | |
| | Credit Balances | |
| | Medicare/Medicaid Reserve | |
| | Other Adjustments/Reserves | |
| VIII. | Adjusted Expected Net Value | |
| IX. | Advance Rate | 90% |
| X. | Borrowing Base | |
| XI. | Revolving Commitment | 8,000,000 |
| XII. | Borrowing Limit (Lesser of Revolving Commitment and Borrowing Base) | |
| XIII. | Less: Accrued Amounts | |

| | | |
|---|---|---|
| XV. | Outstanding Revolving Loan Balance Prior Report | |
| XVI. | Less: Collections | |
| XVII. | Total Interest, Fees, Charges, and Expenses | |
| XVIII. | Revolving Advances Request This Report | |
| XIX. | Revolving Loan Balance This Report | |
| XX. | Net Availability | |
| XXI. | Protective Advances | |

The undersigned desires to make a borrowing of a Revolving Advance on**[*]**, 20**[*]**, in the amount of $**[*]**.

The undersigned represents and warrants that the foregoing information is true, complete and correct and that the collateral reflected herein complies with and conforms to the Eligibility Criteria set forth in Exhibit I to the Revolving Loan and Security Agreement between the Borrowers, the other Loan Parties and Healthcare Finance Group, LLC, a Delaware limited liability company ("**Lender**"), and any supplements and amendments, if any, thereto (the "**Agreement**"; capitalized terms used herein and not otherwise defined are as defined in the Agreement). The undersigned, on behalf of the Borrowers, promises to pay to Lender the new loan balances reflected above, plus interest, as set forth in the Agreement.

The undersigned represents and warrants as follows: (1) that as of the date hereof, (A) each Loan Party is in compliance with each of the terms, covenants, and conditions set forth in the Agreement and that no Default or Event of Default exists or is continuing under the Agreement, and (B) if this Borrowing Base is being delivered in connection with a request for a Revolving Advance, the representations, warranties and covenants contained in Articles 8, 9, 10, and 11 of the Agreement are and will be true, correct, and in compliance both before and after giving effect to the Revolving Advance requested herein and to the application of the proceeds thereof, as though made on and as of such date (it being understood and agreed that any representation or warranty which by its terms is made on a specified date shall be required to be true and correct only as of such specified date); (2) that within 90 days preceding and through the date hereof, no Borrower is aware of receiving any notice from any state or federal regulatory or law enforcement agency citing specific deficiencies that (x) pose immediate jeopardy to the health or safety of the patients in any of any Borrower's facilities; or (y) would otherwise threaten any Borrower's continued participation in the Medicare, Medicaid, and/or any other applicable government program; (3) that within 90 days preceding and through the date hereof, no Borrower is aware of being subject to any investigatory visits by or received any correspondence from any state or federal agency alleging possible improper billing or claims activity**,** except as previously disclosed to Lender in the disclosure schedules attached to the Agreement.

As of the date hereof, no Borrower has diverted or permitted to be diverted any such payments on Receivables from the Lockbox Accounts.

ENZO BIOCHEM INC.

By: _____
Name: _____
Title: _____

Date: _____

**Exhibit III**

**COMPLIANCE CERTIFICATE**

**Dated: _____, 201_**

Healthcare Finance Group, LLC, as Agent
199 Water Street, 31st Floor
New York, New York 10038
Attention: Chief Credit Officer

The undersigned, the [Chief Financial Officer / Senior Vice President of Finance, or other authorized officer acceptable to Lender in its Permitted Discretion] of ENZO BIOCHEM, INC., a New York corporation ("Enzo"), gives this certificate to Lender (defined below), in his or her capacity as an officer of Enzo in accordance with that certain Revolving Loan and Security Agreement, dated as of June 7, 2013 (as amended, amended and restated, supplemented, or otherwise modified from time to time, the "Loan Agreement"), among Enzo, ENZO CLINICAL LABS, INC., a New York corporation ("Enzo Labs"), ENZO LIFE SCIENCES, INC., a New York corporation ("Enzo Life Sciences"), ENZO REALTY LLC, a New York limited liability company ("Enzo Realty"), AXXORA, LLC, a Delaware limited liability company ("Axxora", together with Enzo, Enzo Labs, Enzo Realty and Enzo Life Sciences, collectively, the "Borrowers" and each a "Borrower", and together with ENZO THERAPEUTICS, INC., a New York corporation, the "Loan Parties" and each a "Loan Party"), and HEALTHCARE FINANCE GROUP, LLC, a Delaware limited liability company, as lender (the "Lender"). Capitalized terms used in this Certificate, unless otherwise defined herein, shall have the meanings ascribed to them in the Loan Agreement. I hereby certify that:

1. All representations and warranties set forth in the Loan Agreement are true and correct in all material respects (except any representation or warranty that expressly indicates that it is being made only as of a specific date, in which case such representation or warranty shall be true and correct on and as of such date);

2. Based upon my review of the consolidated and consolidating financial statements of the Loan Parties and their Subsidiaries for the fiscal period ending _____, copies of which are attached hereto, I hereby certify that:

   (a) The sum of (1) the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus (2) the positive difference, if any, between (A) the Adjusted Borrowing Limit and (B) the sum of the Outstanding Balance of the Revolving Loan is $_____ (minimum required is $3,000,000; provided however that such minimum may be increased to $4,000,000 in accordance with Section 10.1 of the Loan Agreement);

(b) The Loan Parties and their Subsidairies' Cash Burn, calculated for the trailing three months, is $_____ (maximum permitted is set forth in Section 10.2 of the Loan Agreement);

Attached as Schedule A are the details underlying such financial covenant calculations.

3. No Default exists on the date hereof, other than: _____ [if none, so state]; and

4. No Event of Default exists on the date hereof, other than: _____ [if none, so state].

[SIGNATURES TO CONTINUE ON FOLLOWING PAGE]

Very truly yours,

By: _____
Name: _____
Title: _____

[COMPLIANCE CERTIFICATE]

**Schedule A**

**Compliance Certificate Supporting Schedule**

**For Period Ending:**

**ARTICLE 10**
**FINANCIAL COVENANTS**
**10.1. Liquidity**

Sum of:

| | | |
|---|---|---|
| (1) | the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties that are being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus | |
| (2) | the positive difference, if any, between (A) the Adjusted Borrowing Limit and (B) the sum of the then Outstanding Balance of the Revolving Loan | |
| | **Total Liquidity** | $ **0** |
| | **Requirement** | $ **3,000,000** |
| | **Status** | |

provided however that commencing the month after any Specified Contribution is made pursuant to Section 10.3 and continuing until satisfaction of the conditions set forth in the last sentence of Section 10.3,

Sum of:

| | | |
|---|---|---|
| (1) | the aggregate amount of cash on hand in operating deposit accounts of the Loan Parties thatare being monitored by the Lender on-line and in real-time and subject to a Control Agreement, plus | |
| (2) | the positive difference, if any, between (A) the Adjusted Borrowing Limit and (B) the sum of the then Outstanding Balance of the Revolving Loan | |
| | **Total Liquidity Covenant** | $ **0** |
| | **Requirement** | $ **4,000,000** |
| | **Status** | |

**Schedule A**

**Compliance Certificate Supporting Schedule**

**For Period Ending:**

**10.2 Maximum Cash Burn**

| | | |
|---|---|---|
| | EBITDA | |
| Sum of (in each case with respect to Loan Parties and their Subsidiaries on a consolidated basis): | | |
| (1) | net income (or net loss) of such Person (calculated before extraordinary items) during such period plus | |
| (2) | the result of the following, in each case (unless otherwise indicated) to the extent deducted in determining such net income (or net loss): | |
| A | interest expense (including that portion attributable to Capital Leases in accordance with GAAP and capitalized interest) during such period; plus | |
| B | income taxes accruing, paid or payable during such period; plus | |
| C | depreciation and amortization expense during such period; plus | |
| D | unrealized losses on investments during such period; plus | |
| E | non cash impairment charges for goodwill or general intangibles during such period, plus | |
| F | losses on foreign exchange currency swaps or any other non-cash foreign exchange charges during such period, plus | |
| G | stock based compensation expenses, including expenses in connection with matching contributions to 401(k) plans, during such period, plus | |
| H | non-cash and/or non-recurring charges and expenses during such period in an amount not to exceed $400,000 in any trailing twelve month period, minus | |
| I | gains from asset dispositions during such period outside of the normal course of business; minus | |
| J | unrealized gains on investments during such period; minus | |
| K | gains on foreign exchange currency swaps during such period; in each case determined in each case in accordance with GAAP. | |
| | Notwithstanding anything to the contrary herein, "EBITDA" shall not include any proceeds of the Life Technologies Commercial Tort Claim. | |
| | EBITDA for the applicable period | $ 0 |
| minus the sum of the following items to the extent actually paid in cash during such period, determined in each case in accordance with GAAP: | | |
| (i) | the greater of (x) scheduled principal payments of long term Debt and Capital Leases to be made during such period and (y) actual principal payments of long term Debt and Capital Leases made during such period, | |
| (ii) | Capital Expenditures made during such period (to the extent not funded by permitted purchase money loans or Capital Leases), | 0 |
| (iii) | interest expense during such period (including that portion attributable to Capital Leases in accordance with GAAP and capitalized interest), | |
| (iv) | taxes during such period | |
| (v) | the aggregate amount of Distributions, and other advances, and loans to officers, Affiliates, and shareholders made during such period, and | |
| (vi) | any required minimum pension plan payments. | |
| | **Cash Burn** | **0.00** |
| | **Requirement** | |
| | **Status** | |

| **Month Ending**: | **Maximum Cash Burn:** |
|---|---|
| May 31, 2013 | ($4,500,000) |
| June 30, 2013 | ($3,650,000) |
| July 31, 2013 | ($1,500,000) |
| August 30, 2013 | ($1,200,000) |
| September 30, 2013 | ($1,000,000) |
| October 31, 2013 | ($850,000) |
| November 30, 2013 | ($850,000) |
| December 31, 2013 | ($850,000) |
| January 31, 2014 | ($850,000) |
| February 28, 2014 | ($850,000) |
| March 31, 2014 | ($500,000) |
| April 30, 2014 | ($300,000) |
| May 31, 2014 | ($300,000) |
| June 30, 2014 and each month ending thereafter | $0 |

EXHIBIT IV
RECEIVABLE INFORMATION

Subject to compliance with and the limitations of applicable law in effect from time to time, including, without limitation, patient confidentiality restrictions which may limit or otherwise proscribe the providing of requested medical information, the following information shall, as appropriate, be provided by the Borrowers to the Lender with respect to the Receivables, together with such other information and in such form as may reasonably be requested from time to time by the Agent (the "**Receivable Information**"):

- customer/patient information;
- insured party and other policy-related information;
- services and products classification information (i.e., D.R.G. and other like information established by the Borrowers from time to time to classify services rendered by the Borrowers or goods sold at or by the Borrowers' institutions);
- Obligor required information (i.e., information provided in the ordinary course of business to any specified Obligor or any other information required to be provided to an Obligor pursuant to any agreement, contract or other arrangement with such Obligor); and
- billing information (i.e., all information provided by the Borrowers on invoices to Obligors and any other information required to be provided pursuant to the Credit and Collection Policy and, to the extent the Transmission will not be via computer interface, including a copy of the admitting face sheet, CMS Form and a detailed copy of the bill).

EXHIBIT V
TRANSMISSION OF ELECTRONIC DATA FILES

(1) The Lender will convey appropriate data requirements and guidelines to the Loan Parties in order for the Loan Parties to provide the necessary data files from their accounts receivable systems. The Lender will require data files of a format reasonably acceptable to the Lender that contains the Loan Parties' accounts receivable information and summary reports. This will include, but not be limited to, detailed charges, payments, adjustments, write offs, aging summary information, insurance master detail and control totals. The above mentioned data files will be provided to the Lender via secure electronic transfer through the Lender's secure FTP site. These files will be provided on an on-going basis according to an established schedule.

(2) The Loan Parties shall give the Lender at least ten Business Days' notice of any coding changes or electronic data processing system modifications made by the Loan Parties which could affect the Lender's processing or interpretation of the data received.

(3) The Lender shall have no responsibility to return to the Loan Parties any information which the Loan Parties provide via e-mails or through the secure FTP site.

(4) The Loan Parties will prepare detail accounts receivable data files of all transaction types for all of its sites that are included in the program. The weekly or monthly cutoff, as applicable, will occur at a predetermined time in each such period, and such cutoff date for all of the sites must occur at exactly the same time. The cutoff date that will be selected will be at the end of business for a specific day of the week or month, as applicable, or in other words, at the end of the Loan Parties' transaction posting process for that day. The Loan Parties will temporarily maintain a copy of the accounts data files in the event that the data is degraded or corrupted during transmission, and needs to be re-transmitted.

(5) The Lender's data analyst will receive the receivables data files, and confirm that the files have been passed without degradation or corruption of data by balancing the detailed items to the control totals that accompany the files. Any problems in this process will be reported to the Loan Parties so that the receivables data file can be re-transmitted, if necessary.

(6) Once the receipt of the receivables data files has been confirmed, the Lender will perform certain tests and edits to determine which receivables meet the Eligibility Criteria. Compliance with concentration limits will be verified by the Lender.

(7) The Loan Parties will create the necessary data files for each of the eligible sites. The data files will contain all detail transactions posted to the accounts receivable system for the specified period (and will indicate the site and the number of items and total dollars on each transaction report for control purposes). The data files will contain balances that reflect the transactions posted on the Loan Parties' systems through the end of business of the specified period.

(8) The Loan Parties will transmit the data files to the Lender according to the established schedule. The Loan Parties should, again, maintain the backup of each of these data files in the event that a re-transmission is necessary.

(9) The Lender's data analyst will confirm that the data files have been received, and will communicate any problems to the Loan Parties in order to initiate a re-transmission. The Lender will then post the transaction files and consequently update the affected balances. Upon completion of the posting process, the Lender will generate summary reports of the posting

process that the Lender will use to complete various funding activities. The Lender summary reports will reference the Loan Parties' transaction codes and activity to codes that are common to the funding program.

(10) The Lender will then compare the updated accounts balances on the Lender's system to the corresponding account balances reflected on the applicable receivable data file. The Lender expects that the balances for the funded receivables will be congruent, and any discrepancies will be immediately examined and resolved through the cooperative effort of the Lender and the Loan Parties. The Lender will produce discrepancy reports (e.g., "Roll-Forward" or "Out of Balance" reports) and the Loan Parties shall respond promptly to such reports.

(11) Once the reconciliation process has been completed and any discrepancies between the Lender's and the Loan Parties' receivable data files resolved through the discrepancy report process described in clause (8) above, the Lender will then process the receivables file and advise the Revolving Lenders that they may make additional Revolving Advances with respect to any new receivable that has satisfied the Eligibility Criteria. The Lender will then proceed through exactly the same process described in clause (5) above.

The Lender will use commercially reasonable efforts to comply with all laws and regulations applicable to its duties hereunder, including patient confidentiality laws and regulations, including as set forth under HIPAA (as defined in the Business Associate Agreement).

**SCHEDULE I**

**ADDRESSES FOR NOTICES**

| Credit Party | Chief Executive Office |
|---|---|
| Enzo Biochem, Inc | 527 Madison Avenue, New York, New York 10022 |
| Enzo Clinical Labs, Inc. | 60 Executive Boulevard, Farmingdale, New York 11735 |
| Enzo Life Sciences, Inc. | 10 Executive Boulevard, Farmingdale, New York 11735 |
| Enzo Therapeutics, Inc. | 60 Executive Boulevard, Farmingdale, New York 11735 |
| Enzo Realty, LLC | 60 Executive Boulevard, Farmingdale, New York 11735 |
| Axxora, LLC | 10 Executive Boulevard, Farmingdale, New York 11735 |

**SCHEDULE II**

SCHEDULE 7.1

ORGANIZATION

| Name | State of Incorporation/Formation | Tax ID# | Organizational # |
|---|---|---|---|
| Enzo Biochem, Inc | New York | 13-2866202 | 407440 |
| Enzo Clinical Labs, Inc. | New York | 13-3392802 | 1141800 |
| Enzo Life Sciences, Inc. | New York | 26-2459329 | 3658694 |
| Enzo Therapeutics, Inc. | New York | 13-3412476 | 1172823 |
| Enzo Realty, LLC | New York | 02-0779558 | 3377230 |
| Axxora, LLC | Delaware | 71-0870551 | 3497474 |

SCHEDULE A

PERMITTED LIENS

**None.**

SCHEDULE 7.10

CERTAIN REPORTS; CLAIMS; REVIEWS

Potential review pursuant to May 14, 2012 Subpoena from the Office of the Inspector General of the US Department of Health and Human Services requesting information regarding certain business operations of Enzo Biochem, Inc.

SCHEDULE 7.11

NOTICE OF RESCISSION OR NON-RENEWAL OF PERMITS AND LICENSES

**None.**

SCHEDULE 7.12

CAPITALIZATION

| Issuer | Owner | Type of Security | Certificate # | % Ownership |
|---|---|---|---|---|
| Enzo Life Sciences, Inc. | Enzo Life Sciences U.S. Holding Corp. | Common Stock | 1 | 100% |
| Enzo Clinical Labs, Inc. | Enzo Biochem Inc. | Common Stock | 1 | 100% |
| Enzo Therapeutics, Inc. | Enzo Biochem Inc. | Common Stock | 1 | 100% |
| Axxora, LLC | Enzo Life Sciences U.S. Holding Corp. | LLC Membership Interests | NA | 100% |
| Enzo Realty, LLC | Enzo Biochem Inc. | Common Stock | 1 | 100% |

**DEBT/CONVERTIBLE SECURITIES, WARRANTS/OPTIONS**

**None.**

**SUBSIDIARIES OF LOAN PARTIES**

In addition to the above listed Loan Parties, Enzo Biochem Inc. has the following Subsidiaries:

Enzo Life Sciences Holding Company, Inc. (NY)

Enzo Life Sciences U.S. Holding Corp. (NY)

Enzo Life Sciences Overseas Holding Co. (DE)

Enzo Life Sciences Europe AG (Switzerland)

Axxora (UK) Ltd.

Enzo Life Sciences Limited (UK)

Enzo Life Sciences (UK) LTD (UK)

Enzo Life Sciences GmbH (Germany)

Enzo Life Sciences BVBA (Belgium)

Enzo Life Sciences (ELS) AG (Switzerland)

ELS France (Branch Office/France)

SCHEDULE 7.13

REAL PROPERTY

(a) OWNED REAL PROPERTY

| Credit Party | Property Location (Address including zip code) | County | Mortgagee-Mortgagor | Nature and Use |
|---|---|---|---|---|
| Enzo Biochem, Inc. (through Enzo Realty, LLC) | 10 Executive Blvd., Farmingdale, New York 11735 | Nassau | N/A | Owned Building (through Enzo Realty, LLC) used for manufacturing, R&D and corporate office for Enzo Life Sciences, and corporate finance for Enzo Biochem, Inc. Maintains inventory and books and records. |

(b) LEASED REAL PROPERTY

| Credit Party | Property Location (Address including zip code) | County | Name and Address of Lessor | Term | Nature and Use |
|---|---|---|---|---|---|
| Enzo Clinical Labs, Inc. | 60 Executive Blvd, Farmingdale, New York 11735 | Nassau | Pari Management Corporation,<br><br>69 Fifth Ave, NY, NY a related party | 4/1/2005 to 3/31/2017 | Manufacturing, Research and Lab operations |

| | | | | | |
|---|---|---|---|---|---|
| Enzo Biochem, Inc. | 527 Madison Ave, New York, NY 10022 | New York | MFA 527 Madison Ave, c/o Mitsui Fudosan American, Inc. 1251 Avenue of the Americas | 6/1/2010 to 5/31/2020 | Office |
| Enzo Life Sciences | 5777 Hines Drive, Ann Arbor, Michigan, 48108 | Washtena w | Wicks Properties LLC, 1126 South Federal Hwy #176<br><br>Ft. Lauderdale, FL 33316 | 5/1/2006 to 4/2016 | Office, manufacturing and R&D |

(c) SUBLEASED REAL PROPERTY

**NONE**

****Enzo also leases several other non-material, small locations as previously disclosed to Lender.**

SCHEDULE 6.1(2) AND SCHEDULE 7.15

FINANCIAL STATEMENTS AND OTHER INFORMATION

See Schedule 7.16

SCHEDULE 7.16

LITIGATION

Potential review pursuant to May 14, 2012 Subpoena from the Office of the Inspector General of the US Department of Health and Human Services requesting information regarding certain business operations of Enzo Biochem, Inc.

On June 7, 2004, the Company and Enzo Life Sciences, Inc., filed suit in the United States District Court for the District of Connecticut against Applera Corporation and its wholly-owned subsidiary Tropix, Inc., now Life Technologies, Inc. (NASDAQ:LIFE). The complaint alleged infringement of six patents relating to DNA sequencing systems, labeled nucleotide products, and other technology. Yale University is the owner of four of the patents and the Company is the exclusive licensee. These four patents are commonly referred to as the "Ward" patents. On November 12, 2012, a jury in New Haven found that one of these patents (United States Patent No. 5,449,667) was infringed and not proven invalid. The jury awarded $48.5 million for this infringement. Prejudgment interest should provide for additional recovery in the tens of millions of dollars. Life Technologies will likely appeal and there can be no assurance that the Company will be successful in this litigation. Even if the Company is not successful, management does not believe that there will be a significant adverse monetary impact on the Company.

The Company is party to other claims, legal actions, complaints, and contractual disputes that arise in the ordinary course of business. The Company believes that any liability that may ultimately result from the resolution of these matters will not, individually or in the aggregate, have a material adverse effect on its financial position or results of operations.

SCHEDULE 7.18

CHANGES IN IDENTITY OR CORPORATE STRUCTURE

Set forth below is each other legal name that each of the Credit Parties has had since its incorporation/formation, together with the date of the relevant change:

| Names | Dates that names changed |
|---|---|
| **Enzo Clinical Labs, Inc.** | |
| ▯ Previously Enzolabs, Inc. | December 19, 1994 |
| **Enzo Life Sciences, Inc.** | |
| ▯ Previously Biomol International, Inc. | January 26, 2009; |
| ▯ Previously Enzo Life Sciences International, Inc. | August 1, 2011 |

Each of the other Loan Parties have not changed their legal names since Incorporation.

Except as set forth below, no Loan Party has changed its identity or corporate structure in any way within the past five years.

| Name of Entity | State of Incorporation | Prior Location(s) |
|---|---|---|
| Enzo Life Sciences International Inc. (the "operating co." and wholly owned subsidiary of Enzo Life Sciences, Inc.) changed its name to Enzo Life Sciences, Inc. | New York | N/A |
| Enzo Life Sciences Ann Arbor merged with Enzo Life Sciences, Inc ( after the name change) | New York | N/A |

SCHEDULE 7.20

TAXES

**NONE**

SCHEDULE 7.23

ERISA MATTERS

Enzo Biochem, Inc. (the "Company") has a qualified Salary Reduction Profit Sharing Plan (the "Plan") for eligible U.S. employees under Section 401(k) of the Internal Revenue Code. The Plan provides for voluntary employee contributions through salary reduction and voluntary employer contributions at the discretion of the Company. For the fiscal years ended July 31, 2012 and 2011, the Company authorized employer matched contributions of 50% of the employees' contribution up to 10% of the employees' compensation, payable in Enzo Biochem, Inc. common stock. The share-based 401(k) employer matched contribution was approximately $649,000 and $690,000 in fiscal years 2012 and 2011, respectively.

SCHEDULE 8.7(c)

TAX SHARING AGREEMENTS

**NONE**

SCHEDULE 9.5

LEASES

***[See attached Excel file]***

**Enzo Biochem and Subsidiaries**
**Operating Lease Commitments**
**As of 5/31/13**

## OPERATING LEASES

| Segment | Type | 7/31/14 | 7/31/15 | 7/31/16 | 7/31/17 | 7/31/18 | Thereafter | Total | Source tab |
|---|---|---|---|---|---|---|---|---|---|
| Clinical Labs | Real estate | 2,352,519 | 2,106,601 | 1,998,577 | 1,385,017 | 254,467 | 555,511 | 8,652,692 | Clin Labs - PSCs |
| Life Sciences | Real estate | 365,423 | 378,833 | 291,668 | — | — | — | 1,035,923 | ELS Group |
| Biochem Corporate | Real estate | 690,895 | 720,300 | 791,004 | 791,004 | 791,004 | 1,450,174 | 5,234,381 | As computed |
| Totals | Real estate | 3,408,837 | 3,205,734 | 3,081,249 | 2,176,021 | 1,045,471 | 2,005,685 | 14,922,996 | |
| Clinical Labs | Equip - operating | 709,016 | 644,787 | 375,146 | 382,920 | 320,379 | 468,893 | 2,901,140 | Clin Labs equip |
| Life Sciences | Equip - operating | 27,089 | — | — | — | — | — | 27,089 | ELS Group |
| Totals | Equip - operating | 736,105 | 644,787 | 375,146 | 382,920 | 320,379 | 468,893 | 2,928,229 | |
| **Totals - operating leases** | | 4,144,941 | 3,850,520 | 3,456,394 | 2,558,941 | 1,365,850 | 2,474,578 | 17,851,225 | |

## CAPITAL LEASES & LOANS

| Segment | Type | 7/31/14 | 7/31/15 | 7/31/16 | 7/31/17 | 7/31/18 | Thereafter | Total | |
|---|---|---|---|---|---|---|---|---|---|
| Clinical Labs | Capital leases | 143,657 | 151,760 | 160,321 | 169,364 | 29,142 | — | 654,244 | Sysmex |
| Clinical Labs | Equipment loans | 37,860 | 37,860 | 37,860 | 37,860 | 22,085 | — | 173,525 | Clin Labs equip |
| Clinical Labs | Auto fleet loans | 120,000 | 120,000 | 20,000 | — | — | — | 260,000 | Clin Labs equip |
| **Total- Capital leases and installment loans** | | **301,517** | **309,620** | **218,181** | **207,224** | **51,227** | — | **1,087,769** | |
| Grand totals | | $ 4,446,458 | $ 4,160,141 | $ 3,674,575 | $ 2,766,165 | $ 1,417,077 | $ 2,474,578 | $ 18,938,994 | |

**Enzo Clinical Labs**
**LEASE COMMITMENTS - Patient Service Centers**
**As of 5/31/2013**

| Lease Location/Address | Landlord | Term | Mo base rent | 07/31/14 | 07/31/15 | 07/31/16 | 07/31/17 | 07/31/18 | THEREAFTER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| ASTORIA | | | | | | | | | | — |
| 30-16 30 Drive | Hellenic Realty | | | | | | | | | — |
| Astoria, N.Y. | | | | | | | | | | |
| | | 10/31/2013 | 2,000 | 24,630 | 6,210 | | | | | 30,840 |
| | | 10/31/2014 | 2,070 | | | | | | | |
| | | | 4,070 | | | | | | | — |
| Bay Shore | | | | | | | | | | — |
| 16 Brentwood Rd | Brentwood LLC | | | | | | | | | — |
| Bayshor, N.Y | | 6/30/2014 | 3,224 | 35,464 | — | | | | | 35,464 |
| | | | | | | | | | | — |
| Bayonne | | | | | | | | | | — |
| 982 Broadway | Corner Square | 2/28/2014 | 4,780 | 58,085 | 59,825 | $ 61,615 | 63,475 | 37,660 | | 280,660 |
| Bayonne, N.J. | | 2/28/2015 | 4,925 | | | | | | | — |
| | | 2/28/2016 | 5,070 | | | | | | | |
| | | 2/28/2017 | 5,225 | | | | | | | |
| | | 2/28/2018 | 5,380 | | | | | | | |
| | | | 25,380 | | | | | | | — |
| Brick Township | | | | | | | | | | — |
| 1140 Burnt Tavern Rd | | | | | | | | | | — |
| Brick, N.J | V&P Realty LLC | 10/31/2013 | 1,500 | 4,500 | | | | | | 4,500 |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Bronx | | | | | | | | | | — |
| 3050 Corlear Ave | Sycamore Court | 4/30/2014 | 2,100 | 25,326 | 25,833 | 26,352 | 26,880 | 20,457 | | 124,848 |
| Bronx N.Y. | | 4/30/2015 | 2,142 | | | | | | | — |
| | | 4/30/2016 | 2,185 | | | | | | | — |
| | | 4/30/2017 | 2,229 | | | | | | | |
| | | 4/30/2018 | 2,273 | | | | | | | — |
| | | | 10,929 | | | | | | | |
| Far Rockaway | | | | | | | | | | |
| 25-24 Central ave | Perla Tate | 11/30/2013 | 1,848 | 22,696 | 23,492 | 7,920 | | | | 54,108 |
| Far Rockaway N.Y | | 11/30/2014 | 1,913 | | | | | | | — |
| | | 11/30/2015 | 1,980 | | | | | | | |
| | | | 5,741 | | | | | | | |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Great Neck | | | | | | | | | | — |
| 560 Northern Blvd | GHP Realty | 6/30/2014 | 2,131 | 23,441 | | | | | | 23,441 |
| Great Neck N.Y | | | | | | | | | | — |
| | | | | | | | | | | — |
| HOLBROOK | Island Estates | | | | | | | | | — |
| 233 Union Ave | | | | | | | | | | — |
| Holbrook N.Y | | 7/31/2014 | 1,483 | 17,796 | 18,504 | | | | | 36,300 |
| | | 7/31/2015 | 1,542 | | | | | | | — |
| | | | 3,025 | | | | | | | — |
| | | | | — | | | | | | — |
| Landing | | | | | | | | | | — |
| 150 lakside blvd | Landing Realty | 12/31/2013 | 1,691 | 8,455 | | | | | | 8,455 |
| Landing N.J | | | | | | | | | | — |
| | | | | — | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 44 E 67 ST | Harley 67st Group | 5/31/2014 | 7,725 | 93,166 | 95,964 | 98,804 | 101,804 | 104,836 | **532,506** | 1,027,080 |
| New York, N.Y | | 5/31/2015 | 7,958 | | | | | | | — |
| | | 5/31/2016 | 8,192 | | | | | | | — |
| | | 5/31/2017 | 8,442 | | | | | | | — |
| | | 5/31/2018 | 8,692 | | | | | | | — |
| | | 5/31/2019 | 8,958 | | | | | | | — |
| | | 5/31/2020 | 9,225 | | | | | | | — |
| | | 5/31/2021 | 9,500 | | | | | | | — |
| | | 5/31/2022 | 9,783 | | | | | | | — |
| | | 5/31/2023 | 10,083 | | | | | | | — |
| | | | 88,558 | | | | | | | — |
| | | | | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 351 East 33rd st | 251East 33rd St Corp | 4/30/2014 | 3,530 | 31,770 | | | | | | 31,770 |
| NEW York. N.Y. | | | | | | | | | | — |
| | | | | | | | | | | — |

**Enzo Clinical Labs**
**LEASE COMMITMENTS - Patient Service Centers**
**As of 5/31/2013**

| Lease Location/Address | Landlord | Term | Mo base rent | 07/31/14 | 07/31/15 | 07/31/16 | 07/31/17 | 07/31/18 | THEREAFTER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| Manhattan | | | | | | | | | | — |
| 120 east 86st | Park Ave Physaicians | 3/31/2014 | 1,400 | 17,080 | 17,936 | 12,352 | | | | 47,368 |
| New York N.Y. | | 3/31/2015 | 1,470 | | | | | | | — |
| | | 3/31/2016 | 1,544 | | | | | | | — |
| | | | 4,414 | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 210 Canal Street | Shang Chiang Realty | 2/28/2014 | 2,850 | 34,770 | 20,748 | | | | | 55,518 |
| New York, NY. | | 2/28/2015 | 2,964 | | | | | | | — |
| | | | 5,814 | | | | | | | — |
| | | | | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 401 East 55st | Jill Partners LLC | 1/31/2014 | 1,803 | 21,960 | 22,620 | 23,298 | 11,820 | | | 79,698 |
| New York NY | | 1/31/2015 | 1,857 | | | | | | | — |
| | | 1/31/2016 | 1,913 | | | | | | | — |
| | | 1/31/2017 | 1,970 | | | | | | | — |
| | | | 7,543 | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 115 Centrak Pk West | 115 CentraL Park West Corp | 4/30/2014 | 3,650 | 44,127 | 45,447 | 46,812 | 48,216 | 36,972 | | 221,574 |
| New York, N.Y. | | 4/30/2015 | 3,759 | | | | | | | — |
| | | 4/30/2016 | 3,872 | | | | | | | — |
| | | 4/30/2017 | 3,988 | | | | | | | — |
| | | 4/30/2018 | 4,108 | | | | | | | — |
| | | | 19,377 | | | | | | | — |
| | | | | | | | | | | — |
| Massapequa | | | | | | | | | | — |
| 596 Broadway | Joseph Aiello | 3/31/2014 | 1,750 | 21,212 | 21,852 | 14,856 | | | | 57,920 |
| Massapequa NY. | | 3/31/2015 | 1,803 | | | | | | | — |
| | | 3/31/2016 | 1,857 | | | | | | | — |
| | | | 5,410 | | | | | | | — |
| | | | | | | | | | | — |
| Mattawan | 558LC | 2/28/2014 | 1,600 | 19,440 | 11,536 | | | | | 30,976 |
| 558 Lloyd Road | | 2/28/2015 | 1,648 | | | | | | | — |
| Mattawan N.J. | | | 3,248 | | | | | | | — |
| | | | | | | | | | | — |
| Morristown | | | | | | | | | | — |
| 111 Madison Ave | DR. Iammatteo | 9/30/2013 | 1,597 | 3,194 | | | | | | 3,194 |
| Morristown N.J. | | | | | | | | | | — |
| | | | | | | | | | | — |
| Paramus | | | | | | | | | | — |
| 611 route 46 West | 611 Route 46 Partners | 11/30/2013 | 4,278 | 52,360 | 53,936 | 55,556 | 18,700 | | | 180,552 |
| Hasbrouck Heights N.J. | | 11/30/2014 | 4,406 | | | | | | — | — |
| | | 11/30/2015 | 4,539 | | | | | | | — |
| | | 11/30/2016 | 4,675 | | | | | | | — |
| | | | 17,898 | | | | | | | — |
| | | | | | | | | | | — |
| Patchogue | 119 North Ocean LLC | 4/30/2014 | 1,300 | 11,700 | | | | | | 11,700 |
| 119 North Ocean Ave | | | | | | | | | | — |
| Patchogue N.Y. | | | | — | — | | | — | | — |
| | | | | | | | | | | — |
| Peekskill | | | | | | | | | | — |
| 17 Hallow Road | Cedar Park | 12/31/2013 | 955 | 4,775 | | | | | | 4,775 |
| Putnam NY. | | | | | | | | | | — |
| | | | | | | | | | | — |
| Piscataway | | | | | | | | | | — |
| 24 Shelton Rd | Shelton Rd LLC | 1/31/2014 | 2,772 | 34,098 | 17,466 | | | | | 51,564 |
| Piscaaway N.J | | 1/31/2015 | 2,911 | | | | | | | — |
| | | | 5,683 | | | | | | | — |
| Plainview | | | | | | | | | | — |
| 740 Old Country Rd | Reservoir Associates | 12/31/2013 | 4,337 | 52,044 | 52,044 | 52,044 | 52,954 | 54,542 | **23,005** | 286,633 |
| Plainview N.Y | | 12/31/2014 | 4,337 | | | | | | | — |
| | | 12/31/2015 | 4,337 | | | | | | | — |
| | | 12/31/2016 | 4,337 | | | | | | | — |
| | | 12/31/2017 | 4,467 | | | | | | | — |
| | | 12/31/2018 | 4,601 | | | | | | | — |
| | | | 26,416 | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Port Jefferson | | | | | | | | | | — |
| 12 Medical Drive | DRP Realty | 6/30/2014 | 1,970 | 21,670 | | | | | | 21,670 |
| Port Jefferson NY. | | | | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |

**Enzo Clinical Labs**
**LEASE COMMITMENTS - Patient Service Centers**
**As of 5/31/2013**

| Lease Location/Address | Landlord | Term | Mo base rent | 07/31/14 | 07/31/15 | 07/31/16 | 07/31/17 | 07/31/18 | THEREAFTER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| Ridge | | | | | | | | | | — |
| 679 Whiskey Road<br>Ridge,N.Y | Kat Mat | 3/31/2014 | 1,207 | 9,656 | | | | | | 9,656 |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Selden | | | | | | | | | | — |
| 243 Boyle Road<br>Selden NY. | ADJ Holdong Corp. | 1/31/2014 | 750 | 4,500 | | | | | | 4,500 |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Smithtown | | | | | | | | | | — |
| 414 Main St<br>Smithtown NY. | Smithhtown Equities | 2/28/2014 | 2,094 | 14,658 | | | | | | 14,658 |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Staten Island | | | | | | | | | | — |
| 1870 Richmond Ave<br>Staten Island N.Y | Moracco LLC | 4/30/2014 | 1,654 | 14,886 | | | | | | 14,886 |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Westbury | | | | | | | | | | — |
| 311 Post Ave<br>Westbury NY. | 311 Post Ave LLC | 11/30/2013 | 1,700 | 20,808 | 21,436 | 7,216 | | | | 49,460 |
| | | 11/30/2014 | 1,751 | | | | | | | — |
| | | 11/30/2015 | 1,804 | | | | | | | — |
| | | | 5,255 | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Voohres | | | | | | | | | | — |
| 800 Cooper Ave<br>Vooohres N.J | Cooper Medical Center | 12/31/2013 | 2,500 | 12,500 | | | | | | 12,500 |
| | | | | | | | | | | — |
| **Total (30)** | | | | **760,767** | **514,849** | **406,825** | **323,849** | **254,467** | **555,511** | **2,816,268** |

Enzo Clinical Labs
LEASE COMMITMENTS
As of 7/31/2013

| Lease Location/Address | Landlord | Term | Mo base rent | 07/31/14 | 07/31/15 | 07/31/16 | 07/31/17 | 07/31/18 | THEREAFTER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| ASTORIA | | | | | | | | | | — |
| 30-16 30 Drive | Hellenic Realty | | | | | | | | | — |
| Astoria, N.Y. | | | | | | | | | | |
| | | 10/31/2013 | 2,000 | 24,630 | 6,210 | | | | | 30,840 |
| | | 10/31/2014 | 2,070 | | | | | | | |
| | | | 4,070 | | | | | | | — |
| Bay Shore | | | | | | | | | | — |
| 16 Brentwood Rd | Brentwood LLC | | | | | | | | | — |
| Bayshor, N.Y | | 6/30/2014 | 3,224 | 35,464 | — | | | | | 35,464 |
| | | | | | | | | | | — |
| Bayonne | | | | | | | | | | — |
| 982 Broadway | Corner Square | 2/28/2014 | 4,780 | 58,085 | 59,825 | $ 61,615 | 63,475 | 37,660 | | 280,660 |
| Bayonne, N.J. | | 2/28/2015 | 4,925 | | | | | | | — |
| | | 2/28/2016 | 5,070 | | | | | | | |
| | | 2/28/2017 | 5,225 | | | | | | | |
| | | 2/28/2018 | 5,380 | | | | | | | |
| | | | 25,380 | | | | | | | — |
| Brick Township | | | | | | | | | | — |
| 1140 Burnt Tavern Rd | | | | | | | | | | — |
| Brick, N.J | V&P Realty LLC | 10/31/2013 | 1,500 | 4,500 | | | | | | 4,500 |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Bronx | | | | | | | | | | |
| 3050 Corlear Ave | Sycamore Court | 4/30/2014 | 2,100 | 25,326 | 25,833 | 26,352 | 26,880 | 20,457 | | 124,848 |
| Bronx N.Y. | | 4/30/2015 | 2,142 | | | | | | | — |
| | | 4/30/2016 | 2,185 | | | | | | | — |
| | | 4/30/2017 | 2,229 | | | | | | | |
| | | 4/30/2018 | 2,273 | | | | | | | — |
| | | | 10,929 | | | | | | | |
| Far Rockaway | | | | | | | | | | |
| 25-24 Central ave | Perla Tate | 11/30/2013 | 1,848 | 22,696 | 23,492 | 7,920 | | | | 54,108 |
| Far Rockaway N.Y | | 11/30/2014 | 1,913 | | | | | | | — |
| | | 11/30/2015 | 1,980 | | | | | | | |
| | | | 5,741 | | | | | | | |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Great Neck | | | | | | | | | | — |
| 560 Northern Blvd | GHP Realty | 6/30/2014 | 2,131 | 23,441 | | | | | | 23,441 |
| Great Neck N.Y | | | | | | | | | | — |
| | | | | | | | | | | — |
| HOLBROOK | Island Estates | | | | | | | | | — |
| 233 Union Ave | | | | | | | | | | — |
| Holbrook N.Y | | 7/31/2014 | 1,483 | 17,796 | 18,504 | | | | | 36,300 |
| | | 7/31/2015 | 1,542 | | | | | | | — |
| | | | 3,025 | | | | | | | — |
| | | | | — | | | | | | — |
| Landing | | | | | | | | | | — |
| 150 lakside blvd | Landing Realty | 12/31/2013 | 1,691 | 8,455 | | | | | | 8,455 |
| Landing N.J | | | | | | | | | | — |
| | | | | — | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 44 E 67 ST | Harley 67st Group | 5/31/2014 | 7,725 | 93,166 | 95,964 | 98,804 | 101,804 | 104,836 | **532,506** | 1,027,080 |
| New York, N.Y | | 5/31/2015 | 7,958 | | | | | | | — |
| | | 5/31/2016 | 8,192 | | | | | | | — |
| | | 5/31/2017 | 8,442 | | | | | | | — |
| | | 5/31/2018 | 8,692 | | | | | | | — |
| | | 5/31/2019 | 8,958 | | | | | | | — |
| | | 5/31/2020 | 9,225 | | | | | | | — |
| | | 5/31/2021 | 9,500 | | | | | | | — |
| | | 5/31/2022 | 9,783 | | | | | | | — |
| | | 5/31/2023 | 10,083 | | | | | | | — |
| | | | 88,558 | | | | | | | — |
| | | | | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 351 East 33rd st | 251East 33rd St Corp | 4/30/2014 | 3,530 | 31,770 | | | | | | 31,770 |
| NEW York. N.Y. | | | | | | | | | | — |
| | | | | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 120 east 86st | Park Ave Physaicians | 3/31/2014 | 1,400 | 17,080 | 17,936 | 12,352 | | | | 47,368 |
| New York N.Y. | | 3/31/2015 | 1,470 | | | | | | | — |
| | | 3/31/2016 | 1,544 | | | | | | | — |
| | | | 4,414 | | | | | | | — |

Enzo Clinical Labs
LEASE COMMITMENTS
As of 7/31/2013

| Lease Location/Address | Landlord | Term | Mo base rent | 07/31/14 | 07/31/15 | 07/31/16 | 07/31/17 | 07/31/18 | THEREAFTER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| Manhattan | | | | | | | | | | — |
| 210 Canal Street | Shang Chiang Realty | 2/28/2014 | 2,850 | 34,770 | 20,748 | | | | | 55,518 |
| New York, NY. | | 2/28/2015 | 2,964 | | | | | | | — |
| | | | 5,814 | | | | | | | — |
| | | | | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 401 East 55st | Jill Partners LLC | 1/31/2014 | 1,803 | 21,960 | 22,620 | 23,298 | 11,820 | | | 79,698 |
| New York NY | | 1/31/2015 | 1,857 | | | | | | | — |
| | | 1/31/2016 | 1,913 | | | | | | | — |
| | | 1/31/2017 | 1,970 | | | | | | | — |
| | | | 7,543 | | | | | | | — |
| Manhattan | | | | | | | | | | — |
| 115 Centrak Pk West | 115 CentraL Park West Corp | 4/30/2014 | 3,650 | 44,127 | 45,447 | 46,812 | 48,216 | 36,972 | | 221,574 |
| New York, N.Y. | | 4/30/2015 | 3,759 | | | | | | | — |
| | | 4/30/2016 | 3,872 | | | | | | | — |
| | | 4/30/2017 | 3,988 | | | | | | | — |
| | | 4/30/2018 | 4,108 | | | | | | | — |
| Massapequa | | | 19,377 | | | | | | | — |
| | | | | | | | | | | — |
| 596 Broadway | Joseph Aiello | 3/31/2014 | 1,750 | 21,212 | 21,852 | 14,856 | | | | 57,920 |
| Massapequa NY. | | 3/31/2015 | 1,803 | | | | | | | — |
| | | 3/31/2016 | 1,857 | | | | | | | — |
| | | | 5,410 | | | | | | | — |
| | | | | | | | | | | — |
| Mattawan | 558LC | 2/28/2014 | 1,600 | 19,440 | 11,536 | | | | | 30,976 |
| 558 Lloyd Road | | 2/28/2015 | 1,648 | | | | | | | — |
| Mattawan N.J. | | | 3,248 | | | | | | | — |
| | | | | | | | | | | — |
| Morristown | | | | | | | | | | — |
| 111 Madison Ave | DR. lammatteo | 9/30/2013 | 1,597 | 3,194 | | | | | | 3,194 |
| Morristown N.J. | | | | | | | | | | — |
| | | | | | | | | | | — |
| Paramus | | | | | | | | | | — |
| 611 route 46 West | 611 Route 46 Partners | 11/30/2013 | 4,278 | 52,360 | 53,936 | 55,556 | 18,700 | | | 180,552 |
| Hasbrouck Heights N.J. | | 11/30/2014 | 4,406 | | | | | | — | — |
| | | 11/30/2015 | 4,539 | | | | | | | — |
| | | 11/30/2016 | 4,675 | | | | | | | — |
| | | | 17,898 | | | | | | | — |
| | | | | | | | | | | — |
| Patchogue | 119 North Ocean LLC | 4/30/2014 | 1,300 | 11,700 | | | | | | 11,700 |
| 119 North Ocean Ave | | | | | | | | | | — |
| Patchogue N.Y. | | | | — | — | | | — | | — |
| | | | | | | | | | | — |
| Peekskill | | | | | | | | | | — |
| 17 Hallow Road | Cedar Park | 12/31/2013 | 955 | 4,775 | | | | | | 4,775 |
| Putnam NY. | | | | | | | | | | — |
| | | | | | | | | | | — |
| Piscataway | | | | | | | | | | — |
| 24 Shelton Rd | Shelton Rd LLC | 1/31/2014 | 2,772 | 34,098 | 17,466 | | | | | 51,564 |
| Piscaaway N.J | | 1/31/2015 | 2,911 | | | | | | | — |
| | | | 5,683 | | | | | | | — |
| Plainview | | | | | | | | | | — |
| 740 Old Country Rd | Reservoir Associates | 12/31/2013 | 4,337 | 52,044 | 52,044 | 52,044 | 52,954 | 54,542 | **23,005** | 286,633 |
| Plainview N.Y | | 12/31/2014 | 4,337 | | | | | | | — |
| | | 12/31/2015 | 4,337 | | | | | | | — |
| | | 12/31/2016 | 4,337 | | | | | | | — |
| | | 12/31/2017 | 4,467 | | | | | | | — |
| | | 12/31/2018 | 4,601 | | | | | | | — |
| | | | 26,416 | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Port Jefferson | | | | | | | | | | — |
| 12 Medical Drive | DRP Realty | 6/30/2014 | 1,970 | 21,670 | | | | | | 21,670 |
| Port Jefferson NY. | | | | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |

Enzo Clinical Labs
LEASE COMMITMENTS
As of 7/31/2013

| Lease Location/Address | Landlord | Term | Mo base rent | 07/31/14 | 07/31/15 | 07/31/16 | 07/31/17 | 07/31/18 | THEREAFTER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| Ridge | | | | | | | | | | — |
| 679 Whiskey Road | Kat Mat | 3/31/2014 | 1,207 | 9,656 | | | | | | 9,656 |
| Ridge, N.Y | | | | | | | | | | — |
| | | | | | | | | | | — |
| Selden | | | | | | | | | | — |
| 243 Boyle Road | ADJ Holdong Corp. | 1/31/2014 | 750 | 4,500 | | | | | | 4,500 |
| Selden NY. | | | | | | | | | | — |
| | | | | | | | | | | — |
| Smithtown | | | | | | | | | | — |
| 414 Main St | Smithhtown Equities | 2/28/2014 | 2,094 | 14,658 | | | | | | 14,658 |
| Smithtown NY. | | | | | | | | | | — |
| | | | | | | | | | | — |
| Staten Island | | | | | | | | | | — |
| 1870 Richmond Ave | Moracco LLC | 4/30/2014 | 1,654 | 14,886 | | | | | | 14,886 |
| Staten Island N.Y | | | | | | | | | | — |
| | | | | | | | | | | — |
| Westbury | | | | | | | | | | — |
| 311 Post Ave | 311 Post Ave LLC | 11/30/2013 | 1,700 | 20,808 | 21,436 | 7,216 | | | | 49,460 |
| Westbury NY. | | 11/30/2014 | 1,751 | | | | | | | — |
| | | 11/30/2015 | 1,804 | | | | | | | — |
| | | | 5,255 | | | | | | | — |
| | | | | | | | | | | — |
| | | | | | | | | | | — |
| Voohres | | | | | | | | | | — |
| 800 Cooper Ave | Cooper Medical Center | 12/31/2013 | 2,500 | 12,500 | | | | | | 12,500 |
| Vooohres N.J | | | | | | | | | | — |
| | | Subtotal - PSC leases | | 760,767 | 514,849 | 406,825 | 323,849 | 254,467 | 555,511 | 2,816,268 |
| Farmingdale | Pari Mgmt | 3/31/2017 | 132,646 | 1,591,752 | 1,591,752 | 1,591,752 | **1,061,168** | — | — | 5,836,424 |
| 60 Executive Blvd, Farmingdale, NY | | | | | | | | | | |
| | | Total - Clinical Labs segment | | **2,352,519** | **2,106,601** | **1,998,577** | **1,385,017** | **254,467** | **555,511** | **8,652,692** |
| | | | | **To Summary** | **To Summary** | **To Summary** | **To Summary** | **To Summary** | **To Summary** | **To Summary** |

Enzo Clinical Labs
EQUIPMENT LEASE COMMITMENTS
As at 7/31/13

## OPERATING LEASES

| Ref | Vendor Name | Period Covered | Lease Type | Minimum Pymts | 7/31/2014 | 7/31/2015 | 7/31/2016 | 7/31/2017 | 7/31/2018 | Thereafter | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LAB | La Barrington(Bloodbanking system) | 1/1/2010-1/1/2014 | Operating | 3,159 | 15,795 | | | | | | 15,795 | |
| | Bio Rad (Reagent Billable) | 6/1/2010-5/31/2015 | Operating | 27,700 | 332,400 | 277,000 | | | | | 609,400 | |
| 130018 EVO | Bio Rad -Evolis (Instrument & Service) | 2/1/2013-1/31/2018 | Operating | $ 4,543 | 54,520 | 54,520 | 54,520 | 54,520 | 27,260 | | 245,338 | |
| Iris | Iris (Instrument) | 9/1/2012-8/31/2017 | Operating | **3,740** | 44,880 | 44,880 | 44,880 | 44,880 | 3,740 | | 183,260 | |
| stat lab | Roche Hardware Stat Lab | 9/1/2012-8/31/2019 | Operating | 2,001 | 24,012 | 24,012 | 24,012 | 24,012 | 24,012 | 26,013 | 146,073 | |
| Roche | Roche Hardware Main Lab (Equipment ) | 3/1/2013-2/28/2020 | Operating | 24,286 | 291,433 | 291,433 | 291,433 | 291,433 | 291,433 | 461,436 | 1,918,601 | |
| | | | sub totals | 65,429 | 763,040 | 691,845 | 414,845 | 414,845 | 346,445 | 487,449 | 3,118,467 | |
| | | | Less interest | | (54,024) | (47,058) | (39,699) | ($ 31,925) | (26,065) | (18,555) | (217,326) | see "interest on Op leases" |
| | | | payments, net | | **709,016** | **644,787** | **375,146** | **382,920** | **320,379** | **468,893** | **2,901,140** | to summary |

## CAPITAL LEASE AND EQUIPMENT LOANS

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sysmex (Instrument) - principal & interest | 9/1/2012-8/31/2018 | Capital | 14,671 | 176,052 | 176,052 | 176,052 | 176,052 | 14,671 | | 718,879 | includes interest, see Sysmex tab for principal only |
| 1R0011-CL | Leica (Service & instrument) | 3/31/2013-2/28/2018 | Loan (0%) | 3,155 | **37,860** | **37,860** | **37,860** | **37,860** | **22,085** | | **173,525** | to summary |
| | Toyota courier fleet | various | | 10,000 | **120,000** | **120,000** | **20,000** | — | — | — | **260,000** | to summary |
| | Approx 25 autos | | | | | | | | | | | |
| | Toyota courier fleet @ 4/30/13 | at 4/30/13 | at 7/31/13 | | | | | | | | | |
| | Current portion | 136,555 | $ 135,000 | | | | | | | | | |
| | long term portion | 159,268 | $ 125,000 | | | | | | | | | |
| | | 295,823 | $ 260,000 | | | | | | | | | |

**Enzo Life Sciences NA**
**Lease Commitments**
**07/31/2013**

**LEASE**

| EXPIRATION | TYPE OF LEASE | DESCRIPTION | MONTHLY PAYMENTS | 7/31/2014 | 7/31/2015 | 7/31/2016 | TOTAL |
|---|---|---|---|---|---|---|---|
| 04/30/2013 | Facility | Rent building at 5777 Hines Dr, Ann Arbor, MI | 30,173 | 365,423 | 378,833 | 291,668 | 1,035,923 |
| 07/30/2014 | Equipment | Copiers - Konica Minolta | 1,502 | 18,028 | — | — | 18,028 |
| 07/30/2014 | Equipment | Copier - Konica Minolta | 755 | 9,061 | — | — | 9,061 |
| **Totals** | | | | **392,512** | **378,833** | **291,668** | **1,063,012** |
| | | | | To summary | To summary | To summary | To summary |

Enzo Clinical Labs
Sysmex Hematology Analyzer
Lease accounting evaluation

***Conclusion - Hermatology Analyzer should be classified as a capital lease because the PV of the minimum lease payments exceeds 90% of the fair value of the leased property at lease inception***

| | | |
|---|---|---|
| mo pmt | 14,671 | Section 1 - Pricing summary totals |
| term | 60 | Five years, per page 1 of agreement |
| tot pmts | **880,275** | |
| Interest Rate | 5.50% | derived, based on insertion into amort table (see tab "PV of Lab Machine") |
| | | |
| PV of payments | 775,354 | as caculated based on payments and derived int rate |
| Less: Interface allowance | (7,000) | from Section 2 of Agreement |
| unlocated | (271) | |
| PV of liability - net | **768,083** | |
| | | |
| FMV of property | 774,778 | from Section 2 of Agreement |
| Less allow, diff above | (7,271) | above |
| | 767,507 | |
| FMV of property - use | **768,083** | use |
| ***NPV as % of FMV*** | ***100.0%*** | |

| Pmt # | Pmt date | Pmt | Interest | Principal | Liability - end | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | **$ 768,083** | | | | |
| 1 | 9/1/2012 | $ 14,671 | 3,520 | 11,151 | 756,932 | | | | |
| 2 | 10/1/2012 | $ 14,671 | 3,469 | 11,202 | 745,730 | | | | |
| 3 | 11/1/2012 | $ 14,671 | 3,418 | 11,253 | 734,477 | | | | |
| 4 | 12/1/2012 | $ 14,671 | 3,366 | 11,305 | 723,172 | | | | |
| 5 | 1/1/2013 | $ 14,671 | 3,315 | 11,357 | 711,815 | | | | |
| 6 | 2/1/2013 | $ 14,671 | 3,262 | 11,409 | 700,406 | | | | |
| 7 | 3/1/2013 | $ 14,671 | 3,210 | 11,461 | 688,945 | through 4/30/13 | | | |
| 8 | 4/1/2013 | $ 14,671 | 3,158 | 11,514 | 677,432 | | | | |
| 9 | 5/1/2013 | $ 14,671 | 3,105 | 11,566 | 665,865 | | | | |
| 10 | 6/1/2013 | $ 14,671 | 3,052 | 11,619 | 654,246 | through 7/31/13 | | | |
| 11 | 7/1/2013 | $ 14,671 | 2,999 | 11,673 | 642,573 | 1 | | | |
| 12 | 8/1/2013 | $ 14,671 | 2,945 | 11,726 | 630,847 | 2 | | | |
| 13 | 9/1/2013 | $ 14,671 | 2,891 | 11,780 | 619,067 | 3 | | | |
| 14 | 10/1/2013 | $ 14,671 | 2,837 | 11,834 | 607,233 | 4 | | | |
| 15 | 11/1/2013 | $ 14,671 | 2,783 | 11,888 | 595,345 | 5 | | | |
| 16 | 12/1/2013 | $ 14,671 | 2,729 | 11,943 | 583,403 | 6 | | | |
| 17 | 1/1/2014 | $ 14,671 | 2,674 | 11,997 | 571,405 | 7 | | | |
| 18 | 2/1/2014 | $ 14,671 | 2,619 | 12,052 | 559,353 | 8 | | | |
| 19 | 3/1/2014 | $ 14,671 | 2,564 | 12,108 | 547,245 | 9 | | | |
| 20 | 4/1/2014 | $ 14,671 | 2,508 | 12,163 | 535,082 | 10 | | | |
| 21 | 5/1/2014 | $ 14,671 | 2,452 | 12,219 | 522,864 | 11 | | | |
| 22 | 6/1/2014 | $ 14,671 | 2,396 | 12,275 | 510,589 | 12 | F14 | | |
| 23 | 7/1/2014 | $ 14,671 | 2,340 | 12,331 | 498,258 | 13 | | | |
| 24 | 8/1/2014 | $ 14,671 | 2,284 | 12,388 | 485,870 | 14 | | | |
| 25 | 9/1/2014 | $ 14,671 | 2,227 | 12,444 | 473,426 | 15 | | To Summary | |
| 26 | 10/1/2014 | $ 14,671 | 2,170 | 12,501 | 460,924 | 16 | | Principal pmts | |
| 27 | 11/1/2014 | $ 14,671 | 2,113 | 12,559 | 448,366 | 17 | | 7/31/2014 | **143,657** |
| 28 | 12/1/2014 | $ 14,671 | 2,055 | 12,616 | 435,750 | 18 | | 7/31/2015 | **151,760** |
| 29 | 1/1/2015 | $ 14,671 | 1,997 | 12,674 | 423,076 | 19 | | 7/31/2016 | **160,321** |
| 30 | 2/1/2015 | $ 14,671 | 1,939 | 12,732 | 410,343 | 20 | | 7/31/2017 | **169,364** |
| 31 | 3/1/2015 | $ 14,671 | 1,881 | 12,791 | 397,553 | 21 | | 7/31/2018 | **29,142** |
| 32 | 4/1/2015 | $ 14,671 | 1,822 | 12,849 | 384,704 | 22 | | | 654,244 |
| 33 | 5/1/2015 | $ 14,671 | 1,763 | 12,908 | 371,796 | 23 | | remaining pmts | 654,244 |
| 34 | 6/1/2015 | $ 14,671 | 1,704 | 12,967 | 358,829 | 24 | F15 | diff - s/b 0 | — |
| 35 | 7/1/2015 | $ 14,671 | 1,645 | 13,027 | 345,802 | 25 | | | |
| 36 | 8/1/2015 | $ 14,671 | 1,585 | 13,086 | 332,716 | 26 | | | |
| 37 | 9/1/2015 | $ 14,671 | 1,525 | 13,146 | 319,569 | 27 | | | |
| 38 | 10/1/2015 | $ 14,671 | 1,465 | 13,207 | 306,363 | 28 | | | |
| 39 | 11/1/2015 | $ 14,671 | 1,404 | 13,267 | 293,096 | 29 | | | |
| 40 | 12/1/2015 | $ 14,671 | 1,343 | 13,328 | 279,768 | 30 | | | |
| 41 | 1/1/2016 | $ 14,671 | 1,282 | 13,389 | 266,379 | 31 | | | |
| 42 | 2/1/2016 | $ 14,671 | 1,221 | 13,450 | 252,928 | 32 | | | |
| 43 | 3/1/2016 | $ 14,671 | 1,159 | 13,512 | 239,416 | 33 | | | |
| 44 | 4/1/2016 | $ 14,671 | 1,097 | 13,574 | 225,842 | 34 | | | |
| 45 | 5/1/2016 | $ 14,671 | 1,035 | 13,636 | 212,206 | 35 | | | |
| 46 | 6/1/2016 | $ 14,671 | 973 | 13,699 | 198,508 | 36 | F16 | | |
| 47 | 7/1/2016 | $ 14,671 | 910 | 13,761 | 184,746 | 37 | | | |
| 48 | 8/1/2016 | $ 14,671 | 847 | 13,824 | 170,922 | 38 | | | |
| 49 | 9/1/2016 | $ 14,671 | 783 | 13,888 | 157,034 | 39 | | | |
| 50 | 10/1/2016 | $ 14,671 | 720 | 13,952 | 143,082 | 40 | | | |
| 51 | 11/1/2016 | $ 14,671 | 656 | 14,015 | 129,067 | 41 | | | |
| 52 | 12/1/2016 | $ 14,671 | 592 | 14,080 | 114,987 | 42 | | | |
| 53 | 1/1/2017 | $ 14,671 | 527 | 14,144 | 100,843 | 43 | | | |
| 54 | 2/1/2017 | $ 14,671 | 462 | 14,209 | 86,634 | 44 | | | |
| 55 | 3/1/2017 | $ 14,671 | 397 | 14,274 | 72,360 | 45 | | | |
| 56 | 4/1/2017 | $ 14,671 | 332 | 14,340 | 58,020 | 46 | | | |
| 57 | 5/1/2017 | $ 14,671 | 266 | 14,405 | 43,615 | 47 | | | |
| 58 | 6/1/2017 | $ 14,671 | 200 | 14,471 | 29,144 | 48 | F17 | | |
| 59 | 7/1/2017 | $ 14,671 | 134 | 14,538 | 14,606 | 49 | | | |
| 60 | 8/1/2017 | $ 14,671 | 67 | 14,604 | 2 | 50 | F18 | | |

| | | | | | |
|---|---|---|---|---|---|
| **$** | **880,275** | $ | 112,194 | **$** | **768,081** |

Enzo Clinical Labs
Interest on Cobas operating leases

| | Portion Interest | 25% 7/31/14 | 22% 7/31/15 | 18% 7/31/16 | 15% 7/31/17 | 12% 7/31/18 | 9% thereafter | 100% TOTAL |
|---|---|---|---|---|---|---|---|---|
| Cobas “6” | 22,338 | 5,553 | 4,837 | 4,081 | 3,281 | 2,679 | 1,907 | 22,338 |
| Cobas 5 | 22,338 | 5,553 | 4,837 | 4,081 | 3,281 | 2,679 | 1,907 | 22,338 |
| Cobas 4 | 21,978 | 5,463 | 4,759 | 4,015 | 3,229 | 2,636 | 1,876 | 21,978 |
| Cobas 3 | 65,934 | 16,390 | 14,277 | 12,044 | 9,686 | 7,908 | 5,629 | 65,934 |
| Cobas 2 | 54,945 | 13,658 | 11,897 | 10,037 | 8,071 | 6,590 | 4,691 | 54,945 |
| Cobas e411 Stat | 15,279 | 3,798 | 3,308 | 2,791 | 2,244 | 1,833 | 1,305 | 15,279 |
| Cobas 4000 stat | 14,515 | 3,608 | 3,143 | 2,651 | 2,132 | 1,741 | 1,239 | 14,515 |
| | 217,326 | 54,024 | 47,058 | 39,699 | 31,925 | 26,065 | 18,555 | 217,326 |

Enzo Clinical Lasbs
EQUIPMENT LEASE COMMITMENTS (Pending)

| Vendor Name | Period Covered | Lease Type | Minimum Pymts | | Instrument Only |
|---|---|---|---|---|---|
| Sebia | | Operating | 4,117 | Reagent Commitment | |
| Beckman -ACL 500 | | Operating | 3,020 | Instrument and Service | 1,833 |
| Bi Rad Phd system | | Operating | 1,444 | Instrument and Service | 997 |

SCHEDULE 9.14

LOANS AND INVESTMENTS

See Schedule 7.12 for Investments (holding of Subsidiaries)

**SCHEDULE III**

**LOCKBOX INFORMATION**

| Credit Party | Name of Bank | Type of Account | Account Numbers |
|---|---|---|---|
| | **CITIBANK** | | |
| **Enzo Clinical Labs, Inc.** | | Checking – Internet (receipts only) | 6319143 |
| | | Checking (customer receipts) | 20047056 |
| | | Gov't Receipts Account | 4977160196 |
| **Enzo Life Sciences, Inc.** | | Checking (customer receipts) | 9939526735 |
| | | Lockbox (customer receipts) | 9993593867 |
| **Axxora, LLC** | | Checking (receipts) | 9948588049 |
| | | Lockbox– (receipts only – lockbox) | 4970619347 |
| | **WELLS FARGO** | | |
| **Enzo Clinical Labs, Inc.** | | Government Account | 4974998072 |

**SCHEDULE IV**

**CREDIT AND COLLECTION POLICY**

**See Attached**

*Private pay or Patient dunning process*

The Private payer or Patient dunning cycle generates invoices on day 1, 30, and 55. The billing department utilizes a SLAR pre-collection file which is generated automatically by the SLAR system once the account ages to 55 days. This file is created on a weekly basis and is sent to the PSC Info Group. Once the patient invoice ages to 95 days the account automatically transfers to the new payer “Collections” and file will be generated and placed to be distributed to the outside collection agency.

*Returned Mail*

Bad address or returned mail is flagged by an Entry Clerk as bad address for each applicable open invoice. On SLAR, the returned mail will be placed on a bad address payer. The bad address payer is worked by a billing representative using Search America and other web based resources. In addition, a monthly missing data report is distributed to sales and the field for collection. Once the bad address has been corrected the invoice is rebilled to regular patient invoice. When the billing department has exhausted its process of obtaining corrected addresses, it is transferred to the “collection agency” payer category and then the file is forwarded to the outside collection agency

VENGROFF WILLIAMS
*Your Revenue. Recovered.*

**COLLECTION SERVICES AGREEMENT**

This Agreement is entered into and effective this 20th day of March 2013 by and between Vengroff Williams, Inc., hereinafter called "AGENCY" and Enzo Clinical Labs, Inc. hereinafter called "CLIENT".

It is mutually agreed, understood and promised as follows:

1. AGENCY will use its best efforts to effect collections of accounts referred to it by the CLIENT. AGENCY will bear all costs associated with collecting CLIENT's delinquent accounts placed with AGENCY, except as otherwise provided herein;

2. AGENCY will fully comply with all applicable Federal and State laws, rules, statutes, acts, decisions, and orders regulating the collection of accounts specifically including, without limitation, the Federal Fair Debt Collection Practices Act, the Federal Fair Credit Reporting Act, HIPAA, the Gramm-Leach-Bliley Financial Services Modernization Act as the same may apply (collectively referred to as "applicable laws and regulations").

3. AGENCY will provide Internet access to the CLIENT for use of reviewing status on accounts placed with AGENCY. CLIENT agrees that the Internet access, processes and/or information whether written or verbal provided by AGENCY is to be used solely for servicing CLIENT accounts.

4. The parties agree that any information provided by a party is to be used solely for collecting delinquent accounts. Further, the parties agree that the transactions contemplated by the agreement shall remain confidential, and that all information and materials furnished to or obtained by a party with respect to any customer or CLIENT of a party, whether in the form of documents or otherwise, shall be held strictly confidential. Such information and materials shall be used by a party solely for the purpose of performing the services required hereunder. Accordingly, the parties agree not to disclose to any person or entity any of the terms hereof or of transactions contemplated hereby, or any customer information (including any credit information) provided by, or obtained from, and CLIENT or customer, any non-public information relating to a party or any other confidential information referred to above, except for: (i) disclosure to a parties' counsel or any agent or advisor acting on its behalf in connection with the negotiation, execution or performance of this agreement; (ii) disclosure as may be required or requested by any governmental agency or representative thereof or pursuant to legal process; (iii) disclosure of information to report to credit bureaus; and (iv) any other disclosure with prior written consent of the respective party. Prior to any disclosure by a party permitted under clause (ii), it shall, if permitted by applicable laws or judicial order, notify the respective party of such pending disclosure. The provisions of this section shall be enforceable during the term of this agreement and for a period of twenty four (24) months after said termination for any cause.

5. AGENCY shall charge fees of 17% on monies collected for accounts placed for collection. AGENCY shall charge fees of 50% on all secondary accounts placed for collection. AGENCY shall charge a resolution fee of 7% for (a) all accounts researched and found to be paid prior to placement (b) product returned (if applicable) pursuant to actions of AGENCY and credited to account (c) any and all credits applied to debtor account as the result of AGENCY action, unless otherwise agreed by both parties. No account will be settled without the express permission of the CLIENT or outside of provided settlement authority.

6. AGENCY shall not institute legal proceedings in the name of the CLIENT without the expressed written authorization of the CLIENT. Once the AGENCY receives written approval for litigation, the AGENCY will bill the CLIENT the necessary court costs and/or non-contingency suit fees and once received from the CLIENT forward said fees and file to its corresponding attorney. CLIENT shall be responsible to insure that said approval to litigate a claim is timely forwarded to AGENCY in order to avoid any Statute of Limitation issues. All matters referred for litigation will be charged a flat 35% referral contingency fee plus court costs plus approved litigation/discovery costs. No litigation/discovery costs will be charged without the express approval of the CLIENT. Upon successful recovery of funds by said attorney the 35% referral fee and approved costs (if not previously paid) will be deducted from the proceeds and the net amount of the recovery will be forwarded to the CLIENT as hereinabove setforth.

7. AGENCY will provide to the CLIENT, by the 25th of the month, a monthly statement of gross amounts collected by AGENCY during the preceding month and remittances will be forwarded on or about said date based on fees due to the CLIENT. It is agreed by the CLIENT that upon notice they will remit to AGENCY timely any funds due for services rendered.

8. The parties agree that all payments made direct to the CLIENT concerning any account assigned to AGENCY for collection shall be verified by the CLIENT within 30 days of receipt. Verification shall be in the form of an email or other writing sufficient to inform AGENCY of check or receipt number, amount paid and date received. Requests for verification from AGENCY to the CLIENT concerning any direct payment information received from the debtor shall be responded to in writing within 72 hours of notice of said request. CLIENT agrees to pay AGENCY fees as stated above for all payments received by the CLIENT directly from the debtor. Once verified and invoiced if the CLIENT fails to pay within 30 days, it is agreed by the Parties that AGENCY

shall be entitled to deduct verified direct payments from funds being held on behalf of CLIENT prior to remittance of the balance of any funds collected.

9. CLIENT will pay AGENCY invoices for approved services rendered, direct pays and/or costs advanced within fifteen (15) days from the date of invoice. AGENCY will charge CLIENT late fees of 18% per annum on fees due after thirty (30) days if funds not available for netting.

10. In the event CLIENT fails to timely remit approved costs and/or fees due on direct payments received by the CLIENT, it is agreed by the parties that after 90 days from the date of the invoice for said costs/fees, AGENCY shall deduct said costs/fees from current funds collected and remit net collections until costs/fees owed are paid in full. This provision notwithstanding, the balance due shall remain immediately due and owing and subject to interest accrual pursuant to the terms of this agreement. The application of this remedy does not preclude AGENCY from availing itself of other contractual remedies allowed by law including but not limited to legal action to collect the balance due.

11. It is understood by the parties that some jurisdictions including but not necessarily limited to Hawaii, New Mexico, West Virginia, Connecticut, Pennsylvania, Washington, South Dakota, New York and Texas require the payment of sales and/or a service tax based on consumer/debtor collections form that state. AGENCY may upon the request of the CLIENT pay any sales or service taxes for and on behalf of the CLIENT in the jurisdictions which require payment of the same based on remittances received. Said taxes shall ultimately be the sole responsibility of the CLIENT and will be deducted from gross remittances received or invoiced directly to the CLIENT as appropriate with payment terms as setforth herein. CLIENT will advise AGENCY if said taxes are to be paid directly by the CLIENT and provide appropriate documentation to confirm the same to said AGENCY. If said taxes are paid directly by the CLIENT, the CLIENT will save and hold harmless the AGENCY from any liability and/or payment of the same. If CLIENT provides proof of tax exemption as outlined by the appropriate State statute AGENCY will not collect nor remit State tax.

12. This Agreement may be terminated at the option of either party by written notice given at least thirty (30) days prior to the date of termination. CLIENT may withdraw collection accounts from AGENCY without payment of fees at any time with 24 hours' notice except under the following terms and conditions, to-wit:
    a. Account has been referred for legal action with CLIENT approval;
    b. A promise to pay has been received by AGENCY and said payment is expected within the next 90 days;
    c. A payment has been received by the AGENCY within the last 60 days;
    d. CLIENT has received a direct payment within the last 3 months;

13. AGENCY will not accept files involving a debtor bankruptcy. If CLIENT has knowledge of a pending bankruptcy it is requested that the file not be forwarded to the AGENCY for collection. In the event debtor files bankruptcy during the collection process the party receiving notice of said bankruptcy shall immediately notify the other respective party of said filing. In the event a bankruptcy is filed and CLIENT requests AGENCY to file a Proof of Claim and monitor the bankruptcy AGENCY will charge an additional fee of $150.00 for said service.

14. AGENCY will not accept files involving a debtor cease and desist notice. If CLIENT has knowledge of a pending cease and desist notice it is requested that the file not be forwarded to the AGENCY for collection.

15. AGENCY agrees to indemnify CLIENT, it affiliates, and their respective directors, officers, employees, agents, counsel and advisors (each an "Indemnified Person") against and hold each of them harmless from any and all liabilities, obligations, losses, claims, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever (including without limitation attorney's fee), (collectively, "Claims"), which may be suffered by, or imposed on, incurred by or asserted against, any Indemnified Person, relating to or in respect of (a) any breach or non-compliance by AGENCY with any representation, warranty or other obligation of AGENCY under or with respect to this agreement (including and third party claim arising out of or resulting from such breach or non-compliance), or (b) any non-compliance in AGENCY's collection policies or practices or with applicable laws and regulations. The sole maximum liability of the AGENCY shall be the sum of $5,000.00 of amounts collected on behalf of the CLIENT for the preceding 12 months whichever is the lesser.

16. CLIENT agrees to indemnify AGENCY, its affiliates, and their respective directors, officers, employees, agents, counsel and advisors (each an "Indemnified Person") against and hold each of them harmless from any and all liabilities, obligations, losses, claims, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever (including without limitation attorney's fees), (collectively, "Claims"), which may be suffered by, or imposed on, incurred by or asserted against, any Indemnified Person, relating to or in respect of (a) any breach or non-compliance by CLIENT with any representation, warranty or other obligation of CLIENT under or with respect to this agreement (including any third party claim arising out of or resulting from such breach or non-compliance), or (b) any non-compliance in CLIENT's reporting of debtor and/or credit information used for collection purposes or reported to credit bureaus, or (c) any breach or non-compliance by CLIENT with applicable laws and regulations. The sole maximum liability of the CLIENT shall be the sum of $5,000.00 or amounts collected on behalf of the CLIENT for the preceding 12 months whichever is the lesser.

17. CLIENT agrees to follow the guidelines of the Fair Debt Collections Practices Act (FDCPA) and the Fair Credit Reporting Act (FCRA) in regards to accurate and timely reporting of customer balances and payment history. CLIENT shall indemnify AGENCY for any erroneous or

untimely updating of customers account to the corresponding credit bureau. CLIENT shall instruct AGENCY, in writing, if they wish to have AGENCY report to a credit bureau.

18. CLIENT agrees that it, its agents, subsidiaries, and employees will not solicit or attempt to solicit an employment agreement of any kind with persons associated with AGENCY. The term "Persons associated with AGENCY" includes, but is not limited to: collectors, managers, salespeople, customer service personnel, and support staff which have an existing employment relationship with AGENCY, and receive compensation based on that relationship. In the event that CLIENT hires an employee of AGENCY without prior written consent from the President of the AGENCY, CLIENT agrees to pay AGENCY a sum equivalent to three years annual salary for the employee at their pay rate on the date of hire with CLIENT. The parties to this agreement acknowledge that the actual damages attributable to this breach would be difficult to calculate exactly, and agree that this is a reasonable sum to approximate the actual losses suffered by AGENCY in the event that said employee is hired by CLIENT. It is agreed by the Parties that this agreement shall remain in full force until said time as this contract is terminated and then for a period of twelve (12) months thereafter.

19. The relationship created by this Agreement is solely that of an independent contractor. This Agreement does not create any form of partnership, joint venture, or other similar business relationship between the parties. AGENCY will use its own name in all communications with CLIENT'S customers, debtors and/or third parties and will not hold itself out as doing business under the name of the CLIENT. AGENCY shall have no authority to bind CLIENT except as contained herein.

20. If any provision, paragraph, or subparagraph of this Agreement is adjudged by any court of law to be void or unenforceable in whole or in part, the adjudication shall not be deemed to affect the validity of the remainder of the Agreement, including any other provision, paragraph, or subparagraph. Each provision, paragraph, and subparagraph of this Agreement is declared to be separable from every other provision, paragraph, and subparagraph and constitutes a separate and distinct covenant.

21. All terms contained in this agreement shall continue in full force and effect for the term of this Agreement and for a period of twelve (12) months after said agreement is terminated for any cause. The longer terms as contained in paragraph 4 above shall extend this time requirement as it pertains to Confidentiality protection and/or issues.

22. Notice pursuant to this agreement shall be sent to the signatories at the addresses as shown below.

23. Neither party shall be liable in damages or have the right to terminate this Agreement for any delay or default in performing hereunder if such delay or default is caused by conditions beyond its control including, but not limited to Acts of God, Government restrictions (including the denial or cancellation of any export or other necessary license), wars, insurrections and/or any other cause beyond the reasonable control of the party whose performance is affected.

24. This represents the entire Agreement among the parties. There are no other agreements, promises, or undertakings between the parties except as specifically set forth herein. No alterations, changes, modifications, or amendments shall be made to this Agreement, except in writing and signed by the parties hereto.

**In witness thereof,** the parties have executed this Agreement in duplicate and stipulate that each has the authority to bind their respective companies to this agreement.

Dated: May 30, 2013

**Vengroff Williams, Inc. By:**

Signature
Kristy L. Carino
380 Townline Rd.
Hauppauge, NY 19788
Phone: 631-757-5100
Fax: 631-670-2280

Dated: _____

**Enzo Clinical Labs, Inc. By:**

Signature Title

Printed Name

**SCHEDULE V**

**PERMITTED DEBT**

**NONE**

EXHIBIT 21

List of subsidiaries of the Company

Enzo Clinical Labs, Inc., a New York Corporation

Enzo Life Sciences, Inc., a New York Corporation

- Enzo Life Sciences (ELS) AG, wholly-owned subsidiary of Enzo Life Sciences, Inc. in Lausen, Switzerland

Enzo Therapeutics, Inc., a New York Corporation

Enzo Realty, LLC, a New York Corporation

EXHIBIT 23.1

**Consent of Independent Registered Public Accounting Firm**

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in the Registration Statements of Enzo Biochem, Inc. and subsidiaries (the "Company") on Form S-8 (File Nos. 333-87153, 333-89308, 333-123712 and 333-172127), and on Form S-3 (File No 333-190321) of our reports, dated October 15, 2013, on our audit of the consolidated financial statements and financial statement schedule as of July 31, 2013 and for the year then ended and the effectiveness of the Company's internal control over financial reporting as of July 31, 2013, which reports are included in this Annual Report on Form 10-K.

/s/ EisnerAmper LLP

New York, New York
October 15, 2013

EXHIBIT 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-87153, 333-89308, 333-123712 and 333-172127) pertaining to the1999 Stock Option Plan, the 2005 Equity Compensation Incentive Plan and the 2011 Incentive Plan of Enzo Biochem, Inc. and;

(2) Registration Statement (Form S-3 No. 333-190321) of Enzo Biochem, Inc.;

of our report dated October 15, 2012, with respect to the consolidated financial statements and schedule of Enzo Biochem, Inc. as of July 31, 2012, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for the years ended July 31, 2012 and 2011, included in this Annual Report (Form 10-K) of Enzo Biochem, Inc. for the year ended July 31, 2013.

/s/ Ernst & Young LLP

Jericho, New York
October 15, 2013

**CERTIFICATIONS**

In connection with the Annual Report on Form 10-K of Enzo Biochem, Inc. ("the Company") for the fiscal year ended July 31, 2013 as filed with the Securities and Exchange Commission on the date hereof, I, Elazar Rabbani, Ph.D., Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 302 of the Sarbanes-Oxley Act of 2002, that:

1. I have reviewed this Annual Report on Form 10-K of Enzo Biochem, Inc.

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 Company as of, and for, the periods presented in this report;

4. The Company'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 Company 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 Company, 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 Company'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 Company's internal control over financial reporting that occurred during the Company's most recent fiscal quarter (the Company's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and

5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company'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 Company'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 Company's internal control over financial reporting.

Date: October 15, 2013

By: /s/ Elazar Rabbani, Ph.D.
Elazar Rabbani, Ph.D.
Chairman of the Board, Chief Executive Officer and Director

EXHIBIT 31 (b)

**CERTIFICATIONS**

In connection with the Annual Report on Form 10-K of Enzo Biochem, Inc. ("the Company") for the fiscal year ended July 31, 2013 as filed with the Securities and Exchange Commission on the date hereof, I, Barry Weiner, Chief Financial Officer and Principal Accounting Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 302 of the Sarbanes-Oxley Act of 2002, that:

1. I have reviewed this Annual Report on Form 10-K of Enzo Biochem, Inc.

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 Company as of, and for, the periods presented in this report;

4. The Company'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 Company 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 Company, 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 Company'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 Company's internal control over financial reporting that occurred during the Company's most recent fiscal quarter (the Company's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and

5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company'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 Company'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 Company's internal control over financial reporting.

Date: October 15, 2013

By: /s/ Barry Weiner
Barry Weiner
President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director

**CERTIFICATE PURSUANT TO**
**18 U.S.C. SECTION 1350,**
**AS ADOPTED PURSUANT TO**
**SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Enzo Biochem, Inc., and Subsidiaries ("the Company") on Form 10-K for the fiscal year ended July 31, 2013 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Elazar Rabbani, Ph.D., Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 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; and

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

Dated: October 15, 2013

By: /s/ Elazar Rabbani, Ph.D.
Elazar Rabbani, Ph.D.
Chairman of the Board, Chief Executive Officer and Director

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Act Commission or its staff upon request.

EXHIBIT 32 (b)

**CERTIFICATE PURSUANT TO**
**18 U.S.C. SECTION 1350,**
**AS ADOPTED PURSUANT TO**
**SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Enzo Biochem, Inc., and Subsidiaries ("the Company") on Form 10-K for the fiscal year ended July 31, 2013 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Barry Weiner, Chief Financial Officer and Principal Accounting Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 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; and

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

Date: October 15, 2013

By: /s/ Barry Weiner
Barry Weiner
President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Act Commission or its staff upon request.