ANNUAL INFORMATION FORM

Year ended December 31, 2011

March 15, 2012

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SPECTRAL DIAGNOSTICS INC.
("SPECTRAL" OR THE "COMPANY")
ANNUAL INFORMATION FORM
FOR THE YEAR ENDED DECEMBER 31, 2011

FORWARD-LOOKING INFORMATION

Certain statements contained or incorporated by reference in this Annual Information Form ("AIF"), constitute "forward-looking statements" (within the meaning of applicable securities laws). Forward-looking statements include those relating to, but not limited to, our expectations, intentions, plans and beliefs, including information as to the future financial or operating performance of Spectral. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects", "intends" or "believes" or variations of such words, or statements that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. Such forward-looking statements or forward looking information reflect management's beliefs, estimates and opinions regarding Spectral's future growth, results of operations, performance, and business prospects and opportunities at the time such statements are made. Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Spectral, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Forward-looking statements are not guarantees of future performance. By their nature, forward-looking statements involve known and unknown risks, uncertainties and other factors that are in many cases beyond the Company's control. Such risks and uncertainties include those factors referred to in the section "Risk Factors" in this AIF. Although Spectral has attempted to identify important factors that could cause actual actions, events or results to differ materially from those expressed or implied in the forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate. Accordingly, readers should not place undue reliance on forward-looking statements. Spectral expressly disclaims any intention or obligation to update or revise any forward-looking statements, or to update the reasons why actual results could differ from those reflected in the forward-looking statements, whether as a result of new information, events or otherwise, except in accordance with applicable securities laws.

CURRENCY

Unless otherwise noted, all dollar references in this AIF are expressed in Canadian dollars.

CORPORATE STRUCTURE

The Company was incorporated pursuant to the *Business Corporations Act* (Ontario) (the "OBCA") on July 29, 1991. Pursuant to Articles of Amendment, effective March 16, 1992, Spectral (i) re-designated, reclassified and changed its authorized capital to provide that the authorized capital consists of an unlimited number of one class of shares designated as "Common Shares" ("Shares"); and (ii) deleted the private company provisions from its Articles.

On April 1, 2005, Spectral amalgamated with its wholly owned subsidiary Sepsis Inc. under the OBCA and continued as Spectral Diagnostics Inc.

The Company's year end was changed to December 31, effective as at the end of the 2006 calendar year.

The Company has two wholly owned subsidiaries: a U.S. subsidiary, Spectral Diagnostics (US) Inc., which was incorporated on September 14, 2009 under Section 102 of the General Law of the State of Delaware; and a Canadian subsidiary, Spectral Diagnostics (New Brunswick) Inc., which was incorporated on June 28, 2010 under the *Business Corporations Act* (New Brunswick). Both subsidiaries were incorporated for regulatory purposes only and do not carry on any active operations.

The head and registered office of the Company is located at 135-2 The West Mall, Toronto, Ontario M9C 1C2.

NARRATIVE DESCRIPTION OF THE BUSINESS OF SPECTRAL

Spectral was incorporated on July 29, 1991 in Ontario, Canada. The Company's strategic focus is on the development and commercialization, in North America, of the first theranostic treatment for severe sepsis and septic shock. This unique approach first identifies patients with high endotoxin levels that would most benefit from a targeted therapy and then applies a treatment that removes endotoxin from the blood stream.

Current products include the Company's Endotoxin Activity Assay ("EAA™") for the identification of patients at risk of developing sepsis and certain proprietary biological reagents. On March 6, 2009, Spectral signed a license agreement with Toray Industries, Inc. of Japan, granting Spectral the exclusive development and commercial rights in the U.S. for Toraymyxin, a therapeutic device for the treatment of sepsis that removes endotoxin from the bloodstream. Under the terms of the agreement, Spectral is seeking U.S. Food & Drug Administration ("FDA") approval for Toraymyxin. The Company intends to commercialize the product together with its EAA™, which is the only FDA cleared diagnostic for the measurement of endotoxin.

On February 26, 2010, the Company received final approval of its Investigation Device Exemption ("IDE") from the FDA, which permits the Company to conduct a pivotal trial for Toraymyxin (the EUPHRATES trial) in the United States.

On March 2, 2010, the Company completed a private placement financing for aggregate gross proceeds of $19.5 million. Net proceeds from the financing, after related costs, were approximately $17.5 million. These funds are being utilized primarily for the commercialization of Toraymyxin in the U.S. market.

In October 2010, the Company announced the initiation of its EUPHRATES trial (Evaluating the Use of Polymyxin B Hemoperfusion in a Randomized controlled trial of Adults Treated for Endotoxemia and Septic shock) in the United States comparing standard of care versus Toraymyxin plus standard of care. The first fifteen clinical trial sites were initiated by the end of the first half of 2011. Fifteen additional sites were approved by the FDA in the third quarter of 2011 and are targeted to be operational by June 30, 2012. The trial, as currently configured, is expected to enroll approximately 360 patients at a total of 30 sites in the U.S. and Canada, with 28 day mortality being the primary end point. An interim analysis is anticipated to occur by the end of the first quarter of 2013.

In November 2010, the Company signed a long-term, exclusive distribution agreement with Toray Industries, Inc. and Toray Medical Co., Ltd. of Japan (collectively "Toray") to market and sell Toraymyxin in Canada. Both the Toraymyxin product and Spectral's EAA™ diagnostic are already approved for sale by Health Canada. The Company is developing commercial plans for the Canadian market. The first step in this commercialization process will be the inclusion of Canadian sites in the EUPHRATES trial.

On September 9, 2011, the Company completed a private placement of 33,333,333 Shares pursuant to an arrangement agreement dated June 28, 2011 (as amended, the "Arrangement Agreement") entered into with Medwell Capital Corp. ("Medwell") for aggregate gross consideration of $10 million. These funds are being utilized primarily for the execution and expansion of the EUPHRATES trial. In accordance with the plan of arrangement (the "Plan of Arrangement") pursuant to the Arrangement Agreement, Medwell distributed 54,282,834 Shares to its shareholders and retained a 13.4% residual ownership position in Spectral.

The Company's focus over the next 2-3 years will be on the implementation of the EUPHRATES trial and obtaining regulatory approval in the United States for a treatment for severe sepsis that combines Spectral's EAA™ diagnostic with Toraymyxin, a targeted therapy. This theranostics approach is the first in the area of sepsis.

EAA™

In 1995, the Company entered into a strategic alliance with two researchers, Dr. Alex Romaschin from The University of Toronto and Dr. Paul Walker from The Toronto General Hospital, to further the development of rapid diagnostic tests for the detection of infections in patients in critical care settings. The alliance was incorporated as Sepsis Inc. ("Sepsis") and carried out research and development on infection diagnostic tests under a joint venture agreement with the Company. In August 1998, the Company and Sepsis had advanced the development of infection diagnostic tests and entered into a strategic development and marketing alliance with Elan Diagnostic ("Elan"), a business unit of Elan Pharmaceutical plc.

Elan made an initial purchase of 7% in Sepsis for US$ 2 million and committed to funding up to US$6 million on the successful attainment of regulatory submissions and approvals. Under the terms of the agreements with Elan, Sepsis was entitled to receive funding for the development of certain infection diagnostic products, milestone payments on the achievement of regulatory submissions and the receipt of approvals for certain infection diagnostic tests, royalties based on "in-market" sales of these tests and on manufacturing profits. The Company received US$ 3 million in funding and earned US$ 2.5 million in milestone revenue from Elan.

The first Sepsis infection diagnostic test, an endotoxin activity assay measuring gram-negative infection, identifies patients who are at risk for developing severe sepsis on admission to intensive care settings. This assay is used to risk stratify patients for developing sepsis.

In February 2001, Spectral reached an agreement to acquire 29.4% of the issued shares in the capital of Sepsis from Dr. Paul Walker and Dr. Alex Romaschin, the co-inventors of Sepsis proprietary infection diagnostic products, in exchange for 1.5 million Shares on the satisfactory submission to the FDA for marketing approval of the gram-negative infection test. The acquisition increased Spectral's ownership to approximately 93% of the issued and outstanding shares of Sepsis, effective June 18, 2001. The Company received Health Canada approval for the EAA™ in December 2002 and FDA clearance in June 2003.

On July 17, 2003, the Company reached an agreement with Elan and its affiliates to terminate their joint venture relationship and all related agreements. Pursuant to such termination, Spectral acquired all rights to the EAA™ including all related intellectual property and marketing rights. On August 20, 2003, the Company paid $1.2 million (received from the proceeds of a private placement to Elan) as consideration for the termination of all previous obligations owing to Elan. The development loan and accrued interest in the amount of approximately $5 million were forgiven by Elan on receipt of the $1.2 million. The gain

on settlement of debt, net of the costs of the acquisition and other expenses, was approximately $3.6 million. Following the termination of the joint venture agreements with Elan, the Company obtained full rights and control over commercialization of the EAA™ effective August 20, 2003. The acquisition increased Spectral's ownership in Sepsis to 100%. On April 1, 2005, the Company amalgamated with Sepsis and continued as Spectral Diagnostics Inc.

TORAYMYXIN

Toraymyxin is a therapeutic hemoperfusion device that removes endotoxin from the bloodstream. Toraymyxin has been used in more than 80,000 patients globally and has demonstrated in clinical trials that it safely and effectively removes endotoxin and reduces mortality in patients with severe sepsis.

Results of a randomized controlled trial (the EUPHAS trial) were published in the Journal of the American Medical Association (JAMA, 2009; Vol. 301 No. 23, 2445-2452) in June 2010. The results demonstrated that when Toraymyxin is added to conventional therapy the result is significantly improved hemodynamics and organ function. Toraymyxin reduced 28-day mortality in patients with severe sepsis and septic shock by 21 % in comparison to those patients in the conventional therapy group.

BIOLOGICAL REAGENTS

Since 1997, the Company has initiated certain programs to market technologies developed in-house in conjunction with its core diagnostic business. Spectral develops, produces and markets recombinant proteins, antibodies and calibrators. These materials are sold for use in research and development as well as in products manufactured by other diagnostic companies.

In 2000, the Company completed non-exclusive license and supply agreements with Beckman Coulter for the access and use of the Company's proprietary Troponin I technologies. Similar agreements were signed with Abbott Laboratories and BioMerieux in 2002. Royalty revenue is earned from these license arrangements based on a percentage of end user sales of Troponin I.

TRENDS

The Company believes that it will experience consistent sales of its EAA™ product but that the market for the diagnostic as a stand-alone product is limited. Sales of this product are currently under $1 million per annum.

Royalty and reagent revenues are expected to continue at similar levels to 2011 for the next year under existing contracts and will help fund help fund day-to-day operations.

Management has determined that the successful commercialization of Toraymyxin, a therapeutic for the absorption of endotoxin, in combination with the EAA™ diagnostic will be its key strategic focus. This therapeutic device is expected to fill a large unmet need for the approximately 250,000 patients that suffer from severe sepsis or septic shock each year in the U.S. This large unmet medical need represents a potential North American market opportunity in excess of $1 billion.

PRODUCTS

Rapid Diagnostics for Sepsis

The Company has developed a rapid diagnostic test for detection of components of gram negative bacterial cell wall (endotoxin). Increased blood levels of endotoxin are indicative of invasive infection or severe leakage of endotoxin from the gut. Endotoxin initiates a systemic response which can rapidly lead to organ dysfunction, septic shock and ultimately death.

The incidence of sepsis is approximately 750,000 cases reported per year in the U.S., with over 1.5 million cases worldwide. Rapid diagnostic tests to rule in or rule out sepsis have previously not been available. The current state of the art in microbiology for one case of sepsis requires a minimum of 24 hours to confirm the presence of a potentially infectious micro-organism and frequently up to 72 hours to definitively rule out the presence of an infectious micro-organism.

The intensive care unit of a hospital ("ICU") has the highest attributable mortality and cost due to infection and its sequelae. ICUs in North America consume significant financial and health care resources and ICU patients with sepsis have mortality rates which generally range between 30% and 50%. Inappropriate antibiotic use and lack of rapid diagnostics for sepsis detection compound the high cost of patient management and the impact of lost productivity due to mortality and morbidity.

A significant increase in sepsis can be expected in the next decade due to a number of factors, such as:

- advances in medical technologies, such as increasingly aggressive cancer therapies;
- improvements in the life expectancy rates of patients predisposed to sepsis, such as premature neonates, patients with co-morbid conditions, and immune suppressed patients;
- the aging of the population, which significantly increases the demographic segment predisposed to sepsis; and
- the widespread use of broad-spectrum antibiotics has increased the rates of both antibiotic resistance and infections contracted as a result of being hospitalized, which have a direct impact on the incidence of sepsis.

The EAA™ – Endotoxin Activity Assay

In December 2001, Spectral submitted an application to Health Canada for approval for marketing of the EAA™ test in Canada and received approval in March 2002 for the manufacture and marketing of the EAA™ test. European approval was received in 2002.

On June 18, 2003, Spectral announced receipt of final notification of market clearance in the U.S. for its EAA™. The uniqueness of the assay is demonstrated by the approval process, which first determined that the EAA™ was both safe and effective, and then directed it to be listed with U.S. Federal Registry as the standard method for endotoxin analysis. Any other assays for endotoxin will require pre-market notification and will be assessed against the Special Controls Guidance Document identifying the EAA™ as the standard.

A chemiluminometer is used in the test measurement. It is a standard instrument with proprietary software required to run the EAA™ test. The EAA™ instrument is manufactured under contract for use in the hospital setting. A streamlined version of the equipment, the Smartline, was added in 2006. This unit is less expensive and smaller, making utilization in limited hospital space easier.

The EAA™ product allows hospital laboratories to respond in less than one hour to the diagnostic needs of ICUs and other critical care settings. The gram-negative test will provide additional rapid diagnostic information to the clinician. The test measures the endotoxin activity in whole blood. The test uses the reaction of endotoxin (lipopolysaccharide) with an antibody that is amplified in whole blood resulting in chemiluminescence. Endotoxin is a major cell wall constituent of gram-negative bacteria and the primary gram-negative bacterial product responsible for septic infections.

The EAA™ assay is currently under evaluation by a number of major health care institutions worldwide and distribution arrangements are in place in Europe and Japan.

Competition

Currently, the EAA™ is the first FDA cleared test for risk stratification of patients for developing severe sepsis and one of two products, the other being a procalcitonin test, on the market. In contrast to the EAA™ test, which produces results within 30 minutes, the procalcitronin test requires a minimum of 24 hours. There are other products in development that may undergo clinical testing trials in the future and perhaps result in further competition to Spectral's assay. The assays will provide information that is different from the EAA™, but may also be useful in the management of sepsis. It is difficult to predict when any of these new assays may be available for the market.

Toraymyxin

The Toraymyxin hemoperfusion device removes endotoxin from the bloodstream and is manufactured by Toray Industries Inc. of Japan. The product is sold in Japan and Europe and has been used safely and effectively in over 80,000 patients worldwide. The product is approved for sale in many jurisdictions worldwide, including Canada. Spectral is currently conducting clinical trials for the purpose of seeking regulatory approval in the United States.

The Company has obtained final approval of its Investigational Device Exemption (IDE) from the FDA to conduct a pivotal U.S. trial – a randomized double blinded prospective trial, comparing standard of care versus standard of care plus Toraymyxin in patients with proven endotoxemia. The use of a specific diagnostic test, the EAA™, to identify endotoxin, a substance that is known to be harmful to the body, and to then proceed to remove it with the Toraymyxin column makes this study unique in the history of sepsis clinical trials. The study is expected to include approximately 360 patients in 30 sites across the U.S. and Canada, with the primary end point of 28 day mortality. The Company initiated the trial in October 2010.

Of the 250,000 patients in the U.S. who are diagnosed with the clinical syndrome of severe sepsis and septic shock each year, there are approximately 125,000 patients who develop high levels of endotoxin and who currently face a high risk of mortality with limited treatment options. If fully penetrated, this unmet need represents a potential market opportunity in excess of $1 billion per annum.

Competition

To date, there has been no other major direct competitor identified in this particular market segment, although there are a number of companies that either are, or were, engaged in clinical research and development related to other sepsis therapies.

There are a number of technologies currently marketed or at a different stage of development as compared to the Company's Toraymyxin program in the U.S., including:

- Xigris™ (Eli Lilly), which is activated protein C and targets factors responsible for coagulation, fibrinolysis, and inflammation such as TNF-alpha. This product had been sold in various major markets around the world but was pulled from the market after an unsuccessful confirmatory pivotal trial in October 2011.

- Talactoferrin alfa (Agennix AG), which is also thought to target TNF and may possibly have an antibacterial effect as well as a significant effect in cancer. The first of two anticipated pivotal phase 3 trials was halted in February 2012 for safety reasons.

- CytoFab™ (AstraZeneca), which is similarly thought to neutralize the effects of TNF in a sepsis patient. In 2005, Protherics was suggesting that TNF had a more profound effect on sepsis syndrome than IL-1. Timing of the initiation of a pivotal trial is uncertain.

- Eritoran (Eisai), which targets the TLR-4 pathway in an attempt to down-regulate its negative effect in critically ill patients. Eisai announced in Q1, 2011 that a pivotal trial with Eritoran failed to meet its primary end point.

- Gambro, Fresenius and CytoSorbents are exploring the hypothesis that the removal of "middle weight molecular peptides" such as cytokines via extracorporeal purification will have a statistically significant treatment effect on sepsis patients. None of these programs have made announcements in respect of conducting late stage clinical trials in the U.S.

- InflammaGen™ Therapeutics has initiated a 200-patient Phase 2 pilot study to examine the efficacy and safety of InflammaGen Shok-Pak as a potential treatment for critically ill patients in the Intensive Care Unit (ICU). Shok-Pak is believed to block auto digestion, a condition in which digestive enzymes not only break down food inside the intestine, but also the intestine itself, causing these enzymes to be carried into the bloodstream and lymphatic system where they digest and destroy healthy tissue. Conditions expected to qualify for the study include new-onset sepsis and septic shock, post-operative complications and new-onset gastrointestinal bleeding. The primary endpoint is to provide preliminary efficacy and safety data on the gastrointestinal administration of InflammaGen Shok-Pak in the reduction of morbidity at discharge or at day 28.

Biological Reagents

Since 1997, the Company's scientific expertise has provided the forum for new products and technologies, positioning the Company for a larger and diversified base of business. Spectral has leveraged its diagnostic expertise in molecular biology, assay development and production into other revenue-producing activities. The Company develops, produces and markets recombinant cardiac proteins, antibodies and calibrators. These are sold for use in research and development as well as in products manufactured by other diagnostic companies.

The Company has actively marketed its capability to develop and manufacture monoclonal and polyclonal antibodies and recombinant proteins. In 1999, the Company engaged non-exclusive distributors to broaden its in-house sales and marketing activities in this area resulting in broader offerings of these products.

The Company has entered into license and supply agreements with diagnostic product manufacturers for the use of its proprietary Troponin I recombinant protein molecules for the calibration of commercial Troponin I assays. Customers for these products include Beckman Coulter, Abbott Laboratories and BioMerieux.

Manufacturing

Spectral manufactures the EAA™ at its Canadian facility at 135-2 The West Mall, Toronto, Ontario. This facility complies with the requirements of Current Good Manufacturing Practices ("CGMPs") and regulating authorities including the FDA and Health Canada's Therapeutic Product Programme. The Company upgraded its manufacturing facilities in 2007 and is self sufficient for the manufacture of its EAA™ product and the manufacture of its proprietary biological reagents. At Spectral, antigens are recombinantly-engineered and produced in bacteria using leading edge technology and know-how. Several recombinantly-derived, patented molecules have shown superior performance and stability over

their native counterpart. The Company's patented recombinant single-chain Troponin I-C polypeptide has gained worldwide recognition as a superior reagent for calibration of cardiac Troponin I assays. Certain non-proprietary assembly processes are currently subcontracted to third party suppliers.

The Toraymyxin device is manufactured by Toray Industries Inc. New plant facilities have been designed and construction has begun. The new plant is expected to be fully operational before the U.S. market launch of Toraymyxin and, in accordance with our license agreement, must comply with FDA regulatory requirements.

GOVERNMENT REGULATION

The Company is subject to various government regulations with respect to the sales and marketing of products in the U.S. and Canada and by comparable laws in other countries. For example, all medical devices sold in the U.S. must be manufactured under U.S. Quality System Regulation for Medical Devices, 21 CFR Part 820 (cGMP compliance). In Canada, such medical devices must be in compliance with Canadian Medical Device Regulations ("CMDR") and ISO 13485:2003 Quality Management Systems Requirements for Regulatory Purposes.

The Company began to introduce Quality Program under ISO 9001: 1994 and under U.S. FDA 21 CFR 820 Quality System regulations as early as 1994. Spectral received its first ISO 9001:1994 Quality Standards certifications in May 1996 with Lloyd's Registrar Quality Assurance (LRQA) and successfully obtained re-certification in 2003.

Health Canada introduced requirements for ISO 13485 Quality Management System for all medical devices manufactured and sold in Canada and made this requirement mandatory commencing January 1, 2003. ISO 13485 Quality Management System compliance is also a pre-requisite for products sold in the European Community. On April 16, 2002, 2004 and 2007 Spectral earned CAN/CSA-ISO 13485-98 Quality Management System certification under Canadian Medical Device Conformity Assessment System ("CMDCAS") that meets the Heath Canada requirements of section 32(2) (f), 32(3) (j) and 32(4) (p) of the CMDR and European Medical device regulations. In 2002, 2004, 2007, and 2010, Spectral also successfully defended FDA foreign facility inspections under 21 CFR QS regulations. In May 2005, Spectral updated its quality programs with the latest ISO Quality Management Systems (ISO 9001:2000 and ISO 13485:2003) and acquired certification by TÜV SÜD America Inc. The following are the current medical devices cleared for marketing by the FDA and the corresponding date of 510(k) and Health Canada approval:

- Endotoxin Activity Assay Kit – Health Canada, March 2002
- Endotoxin Activity Assay Kit – FDA, June 16, 2003
- Endotoxin Activity Assay Kit – CE Mark, September 8, 2003

Toraymyxin, for which Toray Industries Inc. has all regulatory compliance responsibility, is also approved for sale in Canada.

Regulation - U.S.

The testing, production and sale of products are subject to regulation by numerous state and federal governmental authorities, principally the FDA.

Pursuant to the U.S. Federal Food, Drug, and Cosmetic Act ("FD&C Act"), the FDA regulates the pre-clinical and clinical testing, manufacture, labeling, distribution and promotion of medical devices.

Medical devices are segregated into one of three classes (Class I, II or III). The classification of a device is based on the level of control necessary to assure the safety and effectiveness of the device. The complexity of the submission and generally the approval times are based on the regulatory class of the device. Device classification depends on the intended use and also the indications for use of the device. In addition, classification is risk based, that is, the risk the device poses to the patient and/or the user is a major factor in the class it is assigned. Class I devices include devices with the lowest risk and Class III devices include those with the greatest risk. Class I devices are subject to general controls, Class II devices are subject to general controls and special controls and Class III devices are subject to general controls and must receive Pre Market Approval ("PMA") from the FDA.

Before some Class I and most Class II devices can be introduced in the market, either the manufacturer or distributor of the device is required to follow the pre-market notification process described in section 510(k) of the FD&C Act. A 510(k) is a pre-marketing submission made to the FDA to demonstrate that the device to be marketed is as safe and effective as (that is, substantially equivalent to) a legally marketed device that is not subject to a PMA. Applicants must compare their 510(k) device to one or more similar devices currently on the U.S. market and make and support their substantial equivalency claims. Recently, the FDA has been requiring more rigorous demonstration of substantial equivalence than in the past, in some cases requiring submission of extensive clinical data. It generally takes from three to six months from submission to obtain 510(k) clearance but in some cases may take longer. For any devices that are cleared through the 510(k) process, modifications or enhancements that could significantly affect safety or effectiveness, or that constitute a major change in the intended use of the device, require a new 510(k) submission.

A PMA application must be filed for Class III devices. A PMA application must be supported by valid scientific evidence to demonstrate the safety and effectiveness of the device, typically including the results of clinical investigations, bench tests and laboratory studies. The PMA application must also contain a complete description of the device and its components and a detailed description of the methods, facilities and controls used to manufacture the device. In addition, the submission must include the proposed labeling, advertising literature and any training materials. Before the manufacturer of a device can submit the device for FDA approval, it generally must conduct a clinical investigation of the device. Although clinical investigations of most devices are subject to the investigational device exemption ("IDE") requirement, clinical investigations of in-vitro diagnostic tests are exempt from the IDE requirement. In addition, the in-vitro diagnostic device must be labeled for research use only ("RUO") or investigational use only ("IUO"), and distribution controls must be established to assure that in-vitro diagnostic devices distributed for research or clinical investigation are used only for those purposes.

Products are also subject to the Clinical Laboratories Improvement Act ("CLIA") and related federal and state regulations that provide for regulation of laboratory testing. The scope of these regulations includes quality control, proficiency testing, personnel standards and federal inspections. CLIA categorizes tests as "waived", "moderately complex" or "highly complex" on the basis of specific criteria. Future amendments of CLIA or the promulgation of additional regulations impacting laboratory testing may have a material adverse effect on Spectral's ability to market products and may have a material adverse effect upon the Company's business, financial condition or results of operations.

Spectral is currently conducting a registration trial (the EUPHRATES trial) in the U.S. for the purpose of seeking a PMA for Toraymyxin, a Class III medical device.

Toray Industries Inc., under the terms of its license agreement with Spectral, is responsible for all manufacturing regulatory compliance with FDA standards.

Regulation - Canada

Health Canada sets out the requirements governing the sale, importation and advertisement of medical devices. These regulations are intended to ensure that medical devices distributed in Canada are both safe and effective.

The Company is also required to comply with certain procedures for the disposal of its waste products under the Canadian Code of Practice for the Management of Biological Waste (the "Code"). The Company believes it is in compliance with all required Code provisions.

Regulation – Europe

The Company's products are subject to registration under the EU Medical Device Directives for in-vitro diagnostic products. All of Spectral's diagnostic tests have acquired CE mark certifications in Europe.

The products of the Company have been submitted in other countries, when appropriate, for registration and approval on a country-by-country basis.

PATENTS AND TRADEMARKS

Since incorporation, the Company has invested in a patent program to protect its proprietary research and intellectual property. All employees and consultants of the Company are required to assign their rights and inventions to the Company as a term of their employment with Spectral. The patent program of the Company has resulted in the filing of patent applications and the subsequent issue of several patents throughout the world in connection with its EAA™ product, reagents, antibodies and calibrators.

Many patent applications have been filed by the Company in North America and other countries throughout the world in respect of recombinant proteins, genetically engineered molecules, purified proteins and specific antibodies or combinations of antibodies employed in the commercial products of the Company. Several of these applications have resulted in the issue of patents in various jurisdictions. Other patent applications have been filed describing and claiming a patent in relation to the devices on which the reactions take place.

With respect to trademarks, the Company has obtained U.S. trademark registrations for the Spectral design logo and EAA™ products. Spectral trademarks are either registered or have applications pending in numerous other countries. The Company intends to market its diagnostic tests and control products under these trademarks in selected markets.

Patents for Toraymyxin have also been issued worldwide and are the responsibility of Toray Industries Inc. The product has been trademarked outside of North America and trademarks for North America are pending.

PROPERTIES

The Company currently leases approximately 9,000 square feet of office, manufacturing and laboratory space located at 135-2 The West Mall, Toronto, Ontario. Leases on these facilities expire in July 2012 and are renewable for a further five-year term thereafter.

EMPLOYEES

As at December 31, 2011, Spectral had sixteen employees.

LEGAL PROCEEDINGS

The Company, from time to time, may be involved in various claims and legal proceedings of a nature considered normal to its business. While it is not feasible to predict or determine the outcome of these proceedings with certainty, management believes any current actions to be without merit and no provision in respect of these matters has been made in the Company's financial statements.

RISK FACTORS

This AIF includes forward-looking statements about the Company's business and results of operations that are subject to certain risks and uncertainties including those outlined below. In addition to these risk factors, the Company is also subject to additional risks and uncertainties not presently known to it or that it currently has determined to be immaterial. If any such unknown risks materialize or uncertainties occur, the Company's business could be significantly adversely impacted.

The following factors should be considered carefully in evaluating Spectral and its business:

Competition

The Company competes with other entities that develop and produce products aimed at diagnosing and treating similar conditions to those addressed by the Company's products, including early-stage companies, established pharmaceutical companies, universities, research institutions, governmental agencies and health care providers.

In addition, new or prospective products of the Company may be required to compete with existing or future diagnostics, medical devices or other treatments for sepsis. Many of the Company's competitors have more financial and other resources, larger numbers of research and development staff, and more experience and capabilities in researching, developing and testing products in clinical trials, in obtaining FDA and other regulatory approvals, and in manufacturing, marketing and distribution, than the Company. The Company's competitors may succeed in developing, obtaining patent protection for, receiving FDA and other regulatory approvals for, or commercializing, products more rapidly than the Company. In addition, competitive products may be manufactured and marketed more successfully than the Company's new and prospective products.

High Degree of Regulation

Spectral operates in a highly regulated industry and is subject to the authority and approvals of certain regulatory agencies, including Health Canada, the FDA and applicable health authorities in other countries, with regard to the development, testing, manufacturing, marketing and sale of its products. The process of obtaining such approvals can be costly and time-consuming, and there can be no assurance that regulatory approvals will be obtained or maintained. Any failure to obtain (or significant delay in obtaining) or maintain Health Canada and FDA approvals (or, to a lesser extent, approval of applicable health authorities in other countries) for Spectral's new or existing products could materially affect Spectral's ability to market its products successfully and could therefore have a material adverse effect on the business of Spectral.

Rapidly Changing Technology

The field of sepsis is characterized by rapidly changing and developing technologies that include new diagnostics, medical devices and other treatments which could render Spectral's products obsolete at any time and thereby adversely affect the financial condition and future prospects of the Company.

Significant Development and Marketing Required

Diagnostics, medical devices and other therapeutic products require additional development, testing and investment prior to any final commercialization. There can be no assurance that such products will be successfully developed, prove to be safe and effective in clinical trials, receive applicable regulatory approvals, be capable of being produced in commercial quantities at reasonable costs or be successfully marketed. The long-term success of Spectral must be considered in light of the expenses, difficulties and delays frequently encountered in connection with the development of new technology and the competitive and highly regulated environment in which Spectral operates.

In addition, the successful commercialization of the Toraymyxin product in North America will likely require that Spectral finds an appropriate sales and marketing partner that can address the substantial time and costs associated with bringing this new product to market. Failure to find such a partner could adversely affect the financial condition and future prospects of the Company.

Patent Protection and Infringement

The biotechnology industry is heavily reliant on patented technology. The industry is litigious by nature as products and processes may be subject to patent infringement and to claims of infringement upon the patents of others. The Company follows a patent program to protect its technology and takes precautions to avoid infringement against the technology of others.

The extent to which biotechnology discoveries and related products and processes can be effectively protected by patents and be enforceable is uncertain and subject to interpretation by the courts. The technologies, products and processes of Spectral may be subject to claims of infringement upon the patents of others and, if such claims are successful, could result in the requirement to access such technology by license agreement. There can be no assurance that such licenses would be available on commercially acceptable terms or at all. If Spectral is required to acquire rights to valid and enforceable patents but cannot do so at a reasonable cost, Spectral's ability to manufacture or market its products would be materially adversely affected. The cost of Spectral's defense against infringement claims by other patent holders may be significant and could negatively impact Spectral's operations.

Spectral has filed patent applications in North America and other countries relating to, *inter alia*, its EAA™ product, reagents, antibodies and calibrators. Several of these applications have resulted in the issue of patents in various jurisdictions. Although Spectral believes that the outstanding patents applied for may be issued, there can be no such assurance, nor can Spectral assure that competitors will not develop functionally similar or superior diagnostic testing devices. Moreover, there is a question as to the extent to which biotechnology discoveries and related products and processes can effectively be protected by patents. The law regarding the breadth or scope of biotechnology patents is new and evolving. No assurance can be given that, if a patent issued to Spectral is challenged, it will be held to be valid and enforceable or will be found to have a scope sufficiently broad to cover competitors' products or processes. The cost of enforcing Spectral's patent rights in lawsuits that it may bring against infringers may be significant and could negatively impact Spectral's operations.

Licensed Technology

Certain aspects of Spectral's business are predicated on licensed technology and intellectual property, for example, the technology and intellectual property rights that are licensed from Toray Industries, Inc. This subjects Spectral to certain risks that would not be present had Spectral developed the technology and intellectual property independently. Specifically, license agreements typically subject Spectral to milestone obligations and royalty payments. Some of these obligations may be substantial and may

obligate the Company to obtain certain regulatory approvals by a specified date or exercise diligence in bringing potential products to market. The failure to meet these obligations typically results in the termination of the license and the loss of rights to the technology. Any such termination could adversely affect the Company's business and financial condition.

In addition, in many third party licenses, Spectral has no control over the prosecution of patents and other intellectual property rights underlying such licenses. As a result, Spectral is dependent on the licensor to diligently pursue and prosecute these intellectual property rights. In such a circumstance, the licensor may not have sufficient incentive to diligently pursue such protection. The failure of the licensor to diligently pursue such protection could adversely affect the Company's business and financial condition.

Additionally, Spectral typically only receives the benefit of intellectual property protection under licenses in those jurisdictions where applications for protection are filed. As a result, the failure of a licensor to file applications for protection in all jurisdictions where the Company intends to conduct business could undercut the ability of the Company to successfully carry on business in these jurisdictions. This could adversely affect the Company's business and financial condition.

Finally, many third party licenses of technology expire when the patents underlying the technology expire or at some period of time after expiration. As a result, the ability of Spectral to exploit and fully commercialize the technology over time may be limited. This may adversely affect the Company's business and financial condition

Fluctuations in Revenue

The Company's quarterly and annual revenues may fluctuate due to several factors, including seasonal variations in demand, competitive pressure on selling prices, customer order patterns, the rate of acceptance of the Company's products, product delays or production inefficiencies, regulatory uncertainties or delays, clinical trial timing and costs, and timing associated with business development activities, including potential licensing of technologies and international market conditions. The impact of one, or a combination of several, of these factors could have a significant adverse effect on the operations of the Company. In addition, changes in existing collaborative and joint venture relationships, as well as the establishment of new relationships, product licensing and other financing relationships, could materially impact the Company's financial position and results from operations.

Ability to Retain and Attract Key Management and Other Experienced Personnel

Since its inception, the Company has been and continues to be dependent on its ability to attract and retain key scientific and commercial personnel upon whom the Company relies for its product innovations and commercialization programs. The Company is dependent upon the efforts, skill and business contacts of key members of management and other employees for both the information they generate during the normal course of their activities and the synergies which exist amongst their various fields of expertise and knowledge. Accordingly, the Company's continued success will depend upon the ongoing service of these individuals, who are not obligated to remain employed with the Company.

The loss of the services of any of these individuals could have a material adverse effect on revenues, net income and cash flows and could harm the Company's ability to maintain or grow existing assets and raise additional funds in the future.

Market Acceptance of Current and New Products

Spectral's EAA™ and Toraymyxin are relatively new to the market and are subject to all the difficulties new products encounter in development and on introduction. Spectral's ability to market its products will

in part depend on its or its partners' ability to convince physicians and administrators that these products represent viable and efficacious diagnostic tests and related treatments. There can be no assurance that these efforts will be successful.

Uncertainties Regarding Health Care Reimbursement and Reform

The future revenues and profitability of diagnostic companies, as well as the availability of capital, may be affected by the continuing efforts of government and third party payers to contain or reduce costs of health care through various means. For example, in certain foreign markets, pricing of our products is subject to government control. In the U.S., there have been a number of federal and state proposals to implement similar government controls. While the Company cannot predict whether any such legislative or regulatory proposals will be adopted, the announcement or adoption of such proposals could have a material adverse effect on the Company's operations.

Clinical Development

The outcome of any clinical trial is uncertain and subject to various risks, including the rate of patient enrolment, trial costs, time to trial completion, quality of clinical data, regulatory issues, efficacy and safety concerns. The Company's EUPHRATES trial carries similar risks, including the possibility of clinical failure to show efficacy or safety, a potential requirement to increase the number of patients enrolled in the trial and the possibility that the product may not be approved. A material change in any of these items could have a significant adverse impact on the operations of the Company.

Effects of Inflation and Foreign Currency Fluctuations

A significant portion of the Company's revenues are denominated in U.S. and European currency, and, therefore, are subject to fluctuations in exchange rates. There is a risk that significant fluctuations in exchange rates may impact the Company's operating margins and may therefore have an adverse impact on the Company's results of operations.

Manufacturing Capability

The Company, or its contract manufacturers (if applicable), must manufacture products in compliance with regulatory requirements, in sufficient quantities and on a timely basis, while maintaining product quality and acceptable manufacturing costs. If the Company is unable to manufacture or contract for such capabilities on acceptable terms, Spectral's plans for commercialization could be materially adversely affected.

Spectral's manufacturing facilities and those of its contract manufacturers are, or will be, subject to periodic regulatory inspections by the FDA and other regulatory agencies and these facilities are subject to Quality System Regulations requirements of the FDA and other standards organizations. Spectral, or its contractors, may not satisfy such regulatory or standards requirements, and any failure to do so may have a material adverse effect on the Company.

In addition, production and scale-up of manufacturing for new products may require the development of new manufacturing technologies and expertise. Manufacturing and quality control problems may arise as the Company attempts to scale-up manufacturing and such scale-up may not be achieved in a timely manner, at a commercially reasonable cost, or at all.

Need for Additional Financing

Spectral's future liquidity and funding requirements could be impacted by a number of factors, including:

- the extent to which new or existing products are successfully developed, gain market acceptance and are competitive;
- the requirement to finance existing or new projects;
- the costs, timing, potential expansion and results of clinical studies and regulatory actions regarding potential products; and
- the costs and timing associated with business development activities, including potential licensing of technologies patented by others.

The Company may be required, from time to time, to raise additional funds for its clinical development activities and operations. The inability to raise capital on a timely basis, or under appropriate terms, could have a material adverse impact on the operations of the Company.

Product Liability

Spectral may be subject to claims of personal injury and could become liable to clinical laboratories, hospitals and patients for injuries resulting from use of its products. Spectral could suffer financial loss due to defects in its products and such financial loss as well as potential litigation expenses could have a material adverse effect on its operations. Spectral has obtained product liability insurance to protect against possible losses of this nature; however, no assurance can be given that such insurance will be adequate to cover all claims or that Spectral will be able to maintain such insurance at a reasonable cost.

Volatility of Share Price

The stock market has from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of the Company. In addition, the market price of the Shares, like the share prices of many publicly traded biotechnology companies, has been highly volatile. Announcement of technological innovations or new commercial products by the Company or its competitors, developments or disputes concerning patent or proprietary rights, publicity regarding actual or potential medical results relating to products under development by the Company or its competitors, regulatory developments in both the U.S. and foreign countries, public concern as to the safety of biotechnology products and economic and other external factors, as well as period-to-period fluctuations in financial results may have a significant impact on the market price of the Shares.

Reliance on Key Distributors to Market the Company's Products

The Company has a number of arrangements with other companies for the marketing, distribution and sale of its products. Revenues are dependent on the sales and marketing efforts of such third parties and there can be no assurance that their efforts will be successful. Failure to establish sustainable and successful sales and marketing programs may have a material adverse effect on the Company's operations.

If any of the Company's distribution agreements are terminated and the Company is unable to enter into alternative agreements or, if the Company elects to distribute new products directly, additional investment in sales and marketing resources would be required.

Dependence on Contractors

The Company contracts certain services to outside vendors and consultants in order to implement its clinical programs and operations. These services are key to the Company's success. If any of these vendors or services becomes unavailable, the Company would be required to find appropriate alternatives on a timely basis. Any significant delay could have a material adverse impact on the Company's operations.

No Key Man Insurance

The Company does not have key man insurance in place in respect of any of its senior officers or personnel.

Shareholder Control

If certain of the Company's shareholders act together, they may be able to exert a significant degree of influence over the Company's management and affairs and over matters requiring shareholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may facilitate or delay or prevent a change in control of the Company and might affect the market price of the Shares. The interests of controlling shareholders may not always coincide with the Company's interests or the interests of other shareholders.

Legal Proceedings

As the Company is a therapeutic development entity, the Company may become, in the ordinary course of its business, a party to litigation including, among others, claims in respect of indemnifications the Company has extended to third parties (such as clinical sites) in the normal course of business; matters alleging employment discrimination, product liability, patent or other intellectual property rights infringement, patent invalidity or breach of commercial contract. In general, litigation claims can be expensive and time consuming to bring and to defend against and could result in settlements for damages that could significantly impact the Company's results of operations and financial condition.

Insurance coverage may not be sufficient and the Company may be exposed to lawsuits and other claims related to products used in clinical studies and other product liability, which could increase expenses, harm our reputation and keep management from growing the business.

The use of human therapeutic products, including Toraymyxin, involves an inherent risk of product liability claims and adverse publicity. Clinical studies involve trials on humans. These studies create a risk of liability for side effects to participants resulting from an adverse reaction to the products being tested or resulting from negligence or misconduct. While the Company currently maintains insurance related to its completed clinical trials, there is no assurance that this insurance will continue to be available on commercially reasonable terms. Any claims might also exceed the amounts of this coverage. If the Company is unable to obtain insurance at reasonable rates or to otherwise protect itself against potential liability proceedings, it may be required to slow down any future development or investment. The obligation to pay indemnities from clinical trials following complaints could have a material adverse effect on the Company's business, financial condition and results of operations. Claims against the Company, regardless of their merit or potential outcome, may also result in severe public relations problems that could seriously damage the Company's reputation and business viability.

In addition, certain drug retailers require minimum product liability insurance coverage as a condition of purchasing or accepting products for distribution. If any of the Company's products are approved for sale through a compassionate use program, it is the Company's intention to obtain adequate product liability insurance before such products are made available. Failure to satisfy these insurance requirements could impede the Company's ability, or that of any potential distributors of the products, to achieve

distribution of these products, which could have a material adverse effect on the Company's business, financial condition and results of operations.

Limited Number of Products

The success of the Company's operations will depend upon: (i) the availability of appropriate product opportunities; (ii) the Company's ability to identify, select, acquire, grow and market those products; and (iii) the Company's ability to generate funds for future products. The Company can expect to encounter competition from other entities having product objectives similar to the Company's. These groups may compete for the same products as the Company, may be better capitalized, have more personnel, and have a longer operating history.

There can be no assurance that there will be a sufficient number of suitable product opportunities available to the Company or that the Company will be able to identify suitable product opportunities. Identifying attractive opportunities is difficult, highly competitive and involves a high degree of uncertainty.

Illiquid Securities

The Shares have, so far, experienced relatively low trading volumes. Significant trades could adversely affect the market price of the Shares.

History of Operating Losses

Since inception, the Company has incurred losses each year. The accumulated deficit from inception to December 31, 2011 is approximately $20 million. Unless the Company is able to generate sufficient revenue, it will continue to incur losses from operations.

DIVIDENDS

The Company has not paid dividends since its incorporation and Spectral currently has no intention to change its dividend policy in the near future.

DESCRIPTION OF CAPITAL STRUCTURE

Spectral is authorized to issue an unlimited number of Shares. As at March 15, 2012, there were 113,883,394 Shares issued and outstanding. Holders of Shares are entitled to one vote per Share at all meetings of the Company's shareholders, are entitled to dividends if, as and when declared by the board of directors of the Company, and are entitled to participate ratably with respect to the distribution of assets in the event of liquidation, dissolution or winding up of the Company, whether voluntary or involuntary, or any other distribution of assets for the purpose of winding up the Company's affairs. There are no restrictions on the issue, transfer or ownership of the Shares.

As at December 31, 2011, 4,077,500 options to acquire Shares were issued and outstanding. Each option is exercisable for one Share at a price ranging between $0.295 and $0.61 per Share. Such options were granted to the directors, officers and key employees of the Company and have expiry dates ranging from May 19, 2012 to March 14, 2016.

On January 17, 2012, a further 860,000 options to acquire Shares were issued to directors, officers and key employees of the Company. Each such option is exercisable for one Share at an exercise price of $0.285 per Share and has an expiry date of January 16, 2017.

In addition, as at March 15 2012, the following warrants, each exercisable for one Share, were outstanding: (i) 24,375,000 warrants with an exercise price of $0.60 which expire March 2, 2014 ("Warrants"); (ii) 1,462,500 broker warrants with an exercise price of $0.40 which expire March 2, 2014; and (iii) 731,250 broker warrants with an exercise price of $0.60 which expire March 2, 2014.

MARKET FOR SECURITIES

Trading Price and Volume

The Shares are listed and posted for trading on the Toronto Stock Exchange (the "TSX") under the symbol "SDI". Effective January 11, 2012, the Shares began trading on the OTCQX exchange in the U.S.

The following table sets forth the price ranges and volume traded on the TSX of the Shares for the periods indicated:

Month	High ($)	Low ($)	Volume of Common Shares Traded
January 2011	0.35	0.265	721,300
February 2011	0.33	0.285	282,900
March 2011	0.45	0.30	2,365,100
April 2011	0.39	0.29	304,200
May 2011	0.32	0.205	1,193,900
June 2011	0.29	0.23	693,600
July 2011	0.29	0.225	493,700
August 2011	0.26	0.20	404,700
September 2011	0.305	0.20	3,379,600
October 2011	0.35	0.195	1,160,200
November 2011	0.305	0.23	809,100
December 2011	0.28	0.235	1,150,800

Prior Sales

On September 9, 2011, Medwell acquired a further 33,333,333 Shares at a subscription price of $0.30 per Share for aggregate gross proceeds to the Company of $10 million. The Company received, after all transaction costs, net proceeds of approximately $9.5 million, which are being used primarily to advance the Toraymyxin therapeutic through to the end of the Phase III EUPHRATES trial and data release.

Pursuant to the Plan of Arrangement, Medwell distributed 54,282,834 Shares directly to its shareholders. Medwell now holds 15,200,000 Shares, representing approximately 13.4% of the issued and outstanding Shares (calculated on a non-diluted basis). Medwell also holds 15,200,000 Warrants.

DIRECTORS AND OFFICERS

The following table and notes set out the names, province or state and country of residence for each of the directors and executive officers of Spectral, their respective positions held with the Company and their principal occupations during the five preceding years, the periods during which each director has served as a director and the number of Shares and options of Spectral beneficially owned, or controlled or

directed, directly or indirectly, by that person. Each director holds office until the next annual meeting of shareholders of Spectral.

Name **Province/State and Country of Residence** **Position with the Company** **and Principal Occupation**	**Director Since**	**Number of Shares Beneficially Owned** [13]	**Options to Acquire Shares Held** [1]
MR. ANTHONY P. BIHL III [5][6] Connecticut, USA Director Group President, American Medical Systems, Inc.	2008	-	250,000
MR. ANTHONY BUSINSKAS Ontario, Canada Executive Vice President, CFO & Corporate Secretary	-	-	875,000
MS. DEBRA FOSTER Ontario, Canada Vice President Clinical Development	-	42,355	375,000
MR. KEVIN GIESE [7] Alberta, Canada Director Director, President & CEO, Medwell Capital Corp.	2010	1,774.809 [3]	175,000
MR. GUILLERMO HERRERA [5] Illinois, USA Director Chairman of the Board, Pinnacle Biologics Inc.	2006	-	225,000
MR. R. IAN LENNOX [7][11][12] Florida, USA Director Chairman & CEO, Ricerca Biosciences LLC	2006	-	225,000
MR. EDWARD McCORMACK [4][9][10] Ontario, Canada Director Independent Business Consultant	2006	2,500	225,000
MR. ROBERT VERHAGEN Ontario, Canada Vice President Business Development	-	25,000	530,000
DR. PAUL M. WALKER Ontario, Canada Director, President & CEO	2001	1,308,700 [2]	1,370,000
MR. LAINE WOOLLARD [8] Alberta, Canada Director QC, Senior Legal Counsel, TEC Edmonton	2010	25,000	175,000

Notes:

(1) Each option is exercisable on its terms for one Share

(2) These Shares are held by 1464672 Ontario Inc., a company controlled by Dr. Walker

(3) These Shares are held by Mr. Giese directly and by Queensbury Ventures Inc., a company controlled by Mr. Giese

(4) Chairman of the Finance and Audit Committee

(5) Member of the Finance and Audit Committee

(6) Chairman of the Human Resources and Compensation Committee

(7) Member of the Human Resources and Compensation Committee

(8) Chairman of the Nomination and Governance Committee

(9) Member of the Nomination and Governance Committee

(10) Member of the Special Committee (Arrangement Agreement)

(11) Chairman of the Special Committee (Arrangement Agreement)

(12) Mr. Ian Lennox entered into a settlement agreement with the Ontario Securities Commission ("OSC") in March 2006 with regard to his purchase in the market of 25,000 shares of Labopharm Inc. while he was a director of Labopharm. The purchase was made outside a Labopharm imposed blackout period and Mr. Lennox properly filed all insider trading reports. Subsequent to the share purchase, Labopharm entered into a licensing agreement. The possibility of entering into such agreement had been discussed with the Labopharm board before Mr. Lennox made his share purchases. Mr. Lennox initiated contact with the OSC on the matter and cooperated fully with OSC staff.

(13) Information as to Shares beneficially owned is based on information provided by the respective directors and officers and has not been verified by the Company.

All of the directors and officers have been engaged for five years in their present principal occupation or in other capacities with the companies or organizations with which they currently hold positions, with exception of (i) Mr. Guillermo Herrera, who was previously with Abbott Laboratories; and (ii) Mr. Anthony P. Bihl III, who was President & CEO of American Medical Systems from 2008 to 2011 and, previously, CEO of Siemens Medical Solutions Diagnostics.

The directors and executive officers of Spectral, as a group, beneficially own or exercise control or direction over, directly or indirectly 3,178,364 Shares representing approximately 2.8% of the issued and outstanding Shares.

FINANCE AND AUDIT COMMITTEE

The full text of the Finance and Audit Committee's charter is attached hereto as Schedule "A".

There are three members of the Finance and Audit Committee: Mr. McCormack, Mr. Herrera and Mr. Bihl. Mr. McCormack is the Chair of the Finance and Audit Committee and each of the members of the Finance and Audit Committee are independent and financially literate. A brief biography of such members follows:

Edward E. McCormack: Mr. McCormack is an independent business consultant. From 1987 to 1999 he was the Senior Vice President, Chief Financial Officer and a director of Novopharm Limited, one of North America's largest generic pharmaceutical product manufacturers. Mr. McCormack was also the President of Almad Investments Limited and Beaver Power Corporation, investment companies associated with Novopharm Limited. Mr. McCormack's financial background includes specific experience in private placements, bank financing and restructuring, acquisitions and divestitures. He is a member of the Ontario Institute of Chartered Accountants and the former Chairman of the board of directors of Hemosol Corp. and the audit committee thereof.

Anthony Bihl: Mr. Bihl is an experienced executive with more than 25 years in leadership of global healthcare businesses, including a broad base of operational, financial, and senior executive positions. Mr. Bihl is currently Group President of American Medical Systems ("AMS"), a subsidiary of Endo Pharmaceuticals, in Minneapolis, Minnesota. Mr. Bihl was the President & Chief Executive Officer of AMS

from 2008 to 2011. From 2000 to 2007, Mr. Bihl served in various senior leadership positions at Bayer Healthcare, Diagnostics Division including Vice President of Finance, Senior Vice President of Business Planning and Administration and President, Diagnostics Division. Most recently, he was CEO of Siemens Medical Solutions Diagnostics, upon the acquisition of Bayer's Diagnostics Division by Siemens AG.

Guillermo Herrera: Mr. Herrera is a seasoned global healthcare executive with more than 30 years of experience. Mr. Herrera is the Chairman and founder of Pinnacle Biologics Inc. Previously, Mr. Herrera spent 24 years at Abbott Laboratories, most recently serving as Senior Vice President, International Operations and President of Abbott International. In this role, Mr. Herrera was accountable for international commercial operations including sales and marketing of pharmaceutical, nutritional and hospital products in markets outside the U.S.. In 2004, Mr. Herrera joined Rosetta Partners LLC as the Partner and Principal in charge of the private equity division. Mr. Herrera received a B.A. in industrial economics from the Universidad del Valle, Colombia and a M.B.A. from the Kellogg Graduate School of Management at Northwestern University.

For the years ended December 31, 2011 and December 31, 2010, the Company's auditor, PricewaterhouseCoopers LLP, was paid as set out below:

	Aggregate Fees Billed for the Years Ended ($)	
Description of Fees	**December 31, 2011**	**December 31, 2010**
Audit Fees	66,000	75,000
Audit-Related Fees[(1)]	1,239	1,318
Tax Fees	Nil	Nil
All Other Fees[(2)]	37,000	10,000
Total	**104,239**	**86,318**

(1) Administrative expenses

(2) All other fees include: 2011-review of quarterly financial information and financing documentation; 2010- IFRS review

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Except as set out below, no director or executive officer of Spectral or any person that beneficially owns, or controls or directs, directly or indirectly, more than 10% of the Shares, or any associate or affiliate of any such person, has had any material interest in any transaction of the Company within the three most recently completed financial years, which has materially affected or is reasonably expected to materially affect the Company.

Two of the members of the board of directors of the Company, Mr. Kevin Giese and Mr. Laine Woollard, are Medwell nominees to the board of directors. Mr. Giese is the President and CEO of Medwell and both Mr. Giese and Mr. Woollard are directors of Medwell. Both Mr. Giese and Mr. Woollard declared their interest in the Medwell Share subscription and abstained from voting on all matters in connection with the Arrangement Agreement.

In addition to the foregoing, the members of the Special Committee and the non-management members of the board of directors received customary fees from the Company related to attending meetings concerning matters relating to the Arrangement Agreement and had their reasonable expenses in connection therewith reimbursed by the Company. The payment and reimbursement of such fees and

expenses were not contingent on the outcome of the discussions and negotiations with Medwell concerning the Arrangement or any other transaction.

TRANSFER AGENT

The transfer agent and registrar for the Shares is Computershare Trust Company of Canada at its principal office in the city of Toronto.

MATERIAL CONTRACTS

The following is a list of the material contracts of the Company that were either entered into during the most recent financial year or were entered into prior to January 1, 2011 but are still in effect:

- an amended and restated private placement agreement dated February 2, 2010 among Spectral, BioMS Medical Corp. (now Medwell), GrowthWorks Atlantic Venture Fund Ltd., GrowthWorks Canadian Fund Ltd., Mavrix Fund Management Inc. and GrowthWorks Management W.V. Ltd. pursuant to which for so long as Medwell and its affiliates own in the aggregate not less than 10% of the Shares issued and outstanding from time to time, calculated on a non-diluted basis, Medwell is entitled (but not obliged), at any time and from time to time, to nominate two directors to the board of directors of the Company;

- an amended and restated voting agreement dated February 2, 2010 among Spectral, BioMS Medical Corp. (now Medwell), GrowthWorks Atlantic Venture Fund Ltd., GrowthWorks Canadian Fund Ltd., Mavrix Fund Management Inc., GrowthWorks W.V. Management, Dr. Paul Walker (collectively, the "Specified Shareholders") pursuant to which the Specified Shareholders covenant and agree that for so long as Medwell and its affiliates own in the aggregate not less than 10% of the Shares issued and outstanding from time to time, calculated on a non-diluted basis, they shall: (a) vote, or cause to be voted, all of their Shares in favour of the Medwell representatives that are put forward by the Corporation as management nominees at meetings of shareholders; and (b) not vote, or permit to be voted, any of their Shares in favour of more nominees for election to the board of directors (including the Medwell representatives) than the number of directors to be elected at any meeting of shareholders;

- a management services agreement with Medwell;

- a license agreement with Toray Industries, Inc. granting the Company the exclusive development and commercial rights in the U.S. for Toraymyxin;

- a long-term, exclusive distribution agreement with Toray to market and sell Toraymyxin in Canada; and

- the Arrangement Agreement (see "Narrative Description of the Business of Spectral" for further details).

Copies of these contracts may be found under the Company's profile on SEDAR at www.sedar.com.

INTEREST OF EXPERTS

PricewaterhouseCoopers LLP is the auditor of the Company and has advised that it is independent with respect to the Company in accordance with the Rules of Professional Conduct of the Institute of Chartered Accountants of Ontario.

The Special Committee retained Koger Valuation Inc. (“Koger”) to assess the fair market value of the Shares in connection with the Medwell Share subscription pursuant to the Arrangement Agreement. Koger delivered a Valuation and Fairness Opinion addressed to the Special Committee and the board of directors, the full text of which is attached as “Schedule B” to the Company’s management information circular dated July 21, 2011 in respect of the special meeting of shareholders of the Company held on August 26, 2011. The designated professionals of Koger, as a group, own less than one percent of the issued and outstanding Shares.

ADDITIONAL INFORMATION

Additional information relating to Spectral may be found under the Company’s profile on SEDAR at www.sedar.com.

Specifically, additional information including directors' and officers' remuneration and indebtedness, principal holders of Spectral's securities and securities authorized for issuance under equity compensation plans, if applicable, is contained in Spectral's Management Information Circular for its most recent annual meeting of shareholders that involved the election of directors. Additional financial information is also provided in Spectral's comparative financial statements for the years ended December 31, 2011 and December 31, 2010, and in the related management’s discussion and analysis.

A copy of the above documents may also be obtained upon request to the Corporate Secretary of Spectral at 135-2 The West Mall, Toronto, Ontario, M9C 1C2 or by contacting Mr. Adam Peeler, Equicom Investor Relations at 416-815-0700 ext. 225 or apeeler@equicomgroup.com.

For further information, please contact: Mr. Anthony Businskas, Executive Vice President and CFO of Spectral Diagnostics Inc., at the corporate head office at (416) 626-3233 ext. 2200.

SCHEDULE "A"

FINANCE & AUDIT COMMITTEE CHARTER

- **Independent Auditor**
  - recommend to the Board the appointment or replacement of the independent auditor;
  - establish the compensation of the independent auditor;
  - have the independent auditor report directly to the Finance & Audit Committee;
  - determine the extent of involvement of the independent auditor in reviewing unaudited quarterly financial results;
  - meet with the independent auditor prior to the annual audit to discuss the planning, scope and staffing of the audit;
  - approve the selection of the senior audit partners having primary responsibility for the audit;
  - provide for the periodic rotation of the senior audit partners having primary responsibility for the audit and the audit partner responsible for reviewing the audit as required by law;
  - at least on an annual basis, evaluate the qualifications, performance and independence of the independent auditor and the senior audit partners having primary responsibility for the audit; and
  - pre-approve all auditing services and permitted non-audit services performed by the independent auditor.
- **Financial Reporting**
  - prior to their public release and filing with securities regulatory agencies, review and discuss with management and the independent auditor the:
    - press release;
    - consolidated financial statements and notes thereto;
    - management's discussion and analysis; and
    - results of any independent auditor's review requested/approved by the Committee.
  - review the Company's unaudited quarterly financial results including:
    - any significant judgments made in the preparation of financial statements;
    - any significant disagreements among management and the independent auditors in connection with the preparation of financial statements;
    - significant financial reporting issues and judgments made in connection with the preparation of the Company's financial statements;
    - critical accounting policies and practices;
    - integrity of the Company's financial reporting processes; and
    - any correspondence with regulators or governmental agencies and any published reports, which raise material issues regarding the Company's financial statements or accounting policies.
- **Year-end Audit**
  - review of the Company's audited financial results, including:
    - all matters described above with respect to unaudited quarterly financial results;
    - results of the independent audit; and
    - all matters required to be discussed by Statement of Auditing Standards No. 61.
- **Annual Proxy Statement and Regulatory Filings**
  - issue any reports required of the Audit Committee to be included in the Company's annual proxy statement; review and recommend to the Board the approval of all material documents filed with securities regulatory agencies including:
    - Consolidated Year-end Financial Statements;
    - Annual Information Form; and
    - Prospectuses.
- **Related Party Transactions and Off-Balance Sheet Structure**
  - review all related-party transactions and, if deemed appropriate, recommend approval of any particular transaction to the Board; and
  - review all material off-balance sheet structures, which the Company is a party to.

- **Internal Controls, Risk Management and Legal Matters**
  - consider the effectiveness of the Company's internal controls over financial reporting and related information technology security and control;
  - discuss with management the Company's major financial risk exposures and the steps management has taken to monitor and control such exposures; and
  - review with management, and if necessary, the Company's counsel, any legal matter which could reasonably be expected to have a material impact on the Company's financial statements or accounting policies.
- **Capital Structure, Investment and Cash Management Policies, Disclosure Policy**
  - review and approve any changes to the Company's capital structure;
  - review and approve the Company's investment and cash management policy; and
  - review and approve the Company's disclosure policy.
- **"Whistle Blower" and Related Procedures**
  - establish procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters.
- **Review of Charter and Self Assessment**
  - review and reassess annually the adequacy of the Committee's Charter; and
  - review annually the Committee's own performance.
- **Reporting to the Board**
  - make regular reports to the Board, but not less frequently than quarterly.