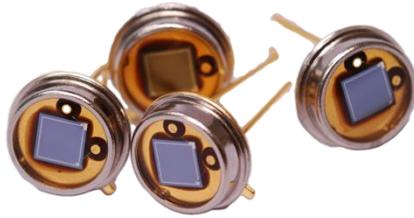
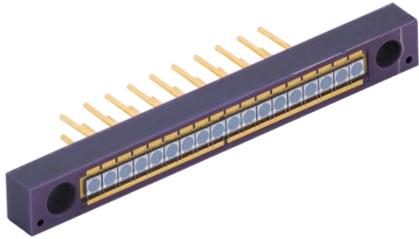




# Zecotek Photonics Inc.



MAPD Photo-Detectors



Detector and Scintillator Arrays for PET



Visible Fiber Lasers

Management's  
Discussion & Analysis

For the year ended  
July 31, 2012

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## **MANAGEMENT DISCUSSION AND ANALYSIS**

**November 28, 2012**

This Management's Discussion and Analysis ("MD&A") of Zecotek Photonics Inc. (the "Company") is dated November 28, 2012. MD&A should be read in conjunction with the Company's audited consolidated financial statements and accompanying notes for the year ended July 31, 2012. The audited consolidated financial statements are prepared in accordance with International Financial Reporting Standards and comparative periods of August 1, 2010 and July 31, 2011 have been restated in accordance with IFRS, where applicable. The reconciliations from GAAP to IFRS are included in Note 17 and the significant accounting policies are outlined in Note 3 of the accompanying annual consolidated financial statements. All dollar amounts are expressed in Canadian dollars except where noted. The parent company's accounts are maintained in Canadian dollars. The business activities of the Company, carried out through its subsidiaries in Singapore are conducted primarily in Singapore dollars. The rate of exchange on July 31, 2012 as reported by the Bank of Canada, for the conversion of one Singapore dollar into Canadian dollars was \$0.8051.

### **Forward-Looking Statements**

This discussion may contain forward-looking statements, including statements regarding the business and anticipated financial performance of the Company, which involve risks and uncertainties. These risks and uncertainties may cause the Company's actual results to differ materially from those contemplated by the forward-looking statements. Factors that might cause or contribute to such differences include, among others, Company's ability to successfully complete new product development along the timelines expected; the Company's need for funds to achieve its goals and uncertainties as to the availability and cost of funding; uncertainty as to the continued and future demand for the Company's products; the development of competing technologies and the possibility of increased competition; and other economic trends and conditions in the markets that the Company and its customers serve; and the effect of the risks associated with technical difficulties or delays in product introductions, improvements, implementation, product development, product pricing or other initiatives of the Company and its competitor. Investors are also directed to consider the other risks and uncertainties discussed in the Company's required financial statements and filings. All other companies and products listed herein may be trademarks or registered trademarks of their respective holders.

### **Company Overview**

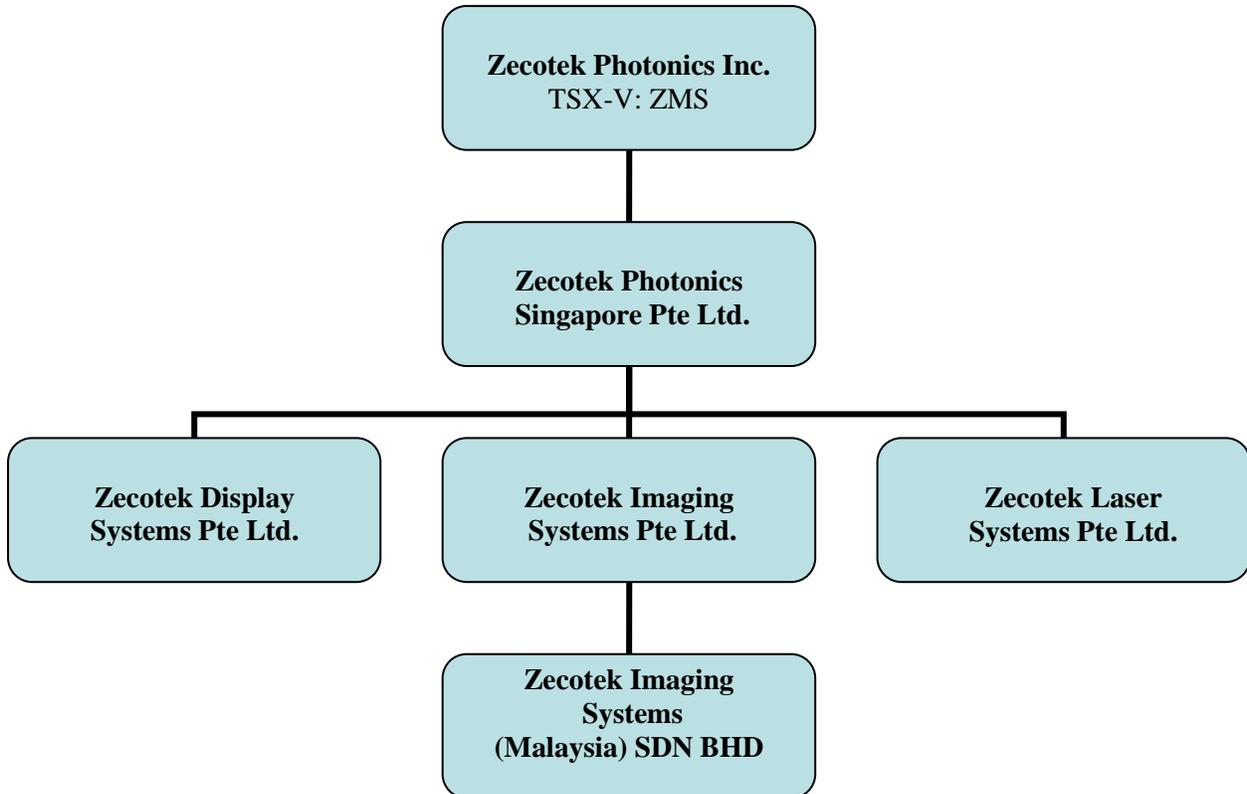
Zecotek Photonics Inc. develops leading-edge photonics technologies and products for commercial and research applications in many different markets: medical, bio-science, high-energy physics, pharmaceutical research, material processing, engineering and industrial design and multi-media.

Founded in 2004, the Company has focused on building shareholder value by securing a strong intellectual property portfolio, completing the development of unique technologies for targeted markets and pursuing the optimum commercialization strategy.

Zecotek Photonics Inc. has three operational subsidiary companies: Zecotek Imaging Systems Pte Ltd. (ZIS); Zecotek Display Systems Pte Ltd. (ZDS); and Zecotek Laser Systems Pte Ltd. (ZLS). All of these subsidiary companies are incorporated in Singapore and owned by Zecotek Photonics Singapore Pte.Ltd., a holding company. Each operational subsidiary is autonomous, in the sense that each has its own patent portfolio and management team..

Zecotek’s corporate headquarters is located in Vancouver, B.C. It is a Canadian public company trading on the TSX Venture Exchange under the symbol “ZMS” and on the Frankfurt Stock Exchange under the trading symbol “W11”. The Company’s website is [www.zecotek.com](http://www.zecotek.com).

**Company Structure**



**Zecotek Imaging Systems Pte Ltd. (ZIS)**

ZIS has research laboratory facilities in Singapore and Moscow, where it has developed its patented lutetium fine silicate (LFS) scintillation crystals and solid-state MAPD photo-detectors. It works in partnership with the University of Washington in Seattle, on the integration of PET/MRI for imaging and pharmaceutical research. The focus of the partnership is the integration of a compact design for imaging of specific organs while offering an ideal diagnostic modality.

The LFS crystal and the MAPD are central components for high-resolution PET scanners for medical diagnostics and treatment. They are also key devices to high energy physics experiments, specifically the Large Hadron Collider at CERN, Switzerland and the Linear Accelerator at Fermi Lab, USA. CERN and Fermi Lab have subcontracted ZIS to complete the development of a new version of ZIS’s MAPD with specific parameters for their main new particle detection programs.

**Zecotek Display Systems Pte Ltd. (ZDS)**

ZDS scientists have developed and demonstrated a colour, 32-inch 3D display prototype that offers multiple viewers with true volumetric visualization while exhibiting depth and parallax without the use of external glasses. ZDS’s Real-Time 3D2D Display is a novel, patented display system for the visualization of images

and data, which has been developed in-house by Zecotek's scientific team and technical staff and does not rely on any licensed intellectual property. All intellectual property is owned and controlled by Zecotek. The Zecotek 3D display technology has been granted US and Australian Patents under PCT.

Based on the auto stereoscopic principle, but with patent pending innovation, it represents a new generation of 3D displays. It has the capability of simultaneously presenting to multiple users both 3D and 2D images on the same screen with separate views and at different viewing angles. Its design provides for multi-users, multi-views, freedom of movement, high resolution in both 3D and 2D modes, superior image dynamic range in 2D mode, 2D and 3D simultaneous displays, common brightness, compatibility with existing applications and cost competitiveness at all stages of adoption and levels of application.

The 3D display system provides for viewing a volumetric representation without eye strain. The viewing of such 3D images does not require the use of any supplementary means such as glasses, does not drastically limit the position of the viewer with respect to the display, and allows simultaneous viewing of the 3D display by many viewers from a relatively wide field of view.

#### ***Zecotek Laser Systems Pte Ltd. (ZLS)***

ZLS has a joint laboratory with Inversion Fiber/Novolaser for the integration of tuneable fiber lasers in the visible spectrum. The tuneable visible fiber laser technology platform is now complete and lasers based on the platform have a large area of application in medicine, fundamental research, inspection and other industries. These lasers provide unique output wavelengths and wide tuning range and are specially suited for bio-medical applications using fluorescent techniques, such as gene sequencing, proteomics, scanning laser microscopy and flow cytometry. In these applications they can replace conventional laser types with sub-optimal wavelengths and provide a unified fiber laser platform covering the majority of the visible spectrum. Zecotek's tuneable fiber lasers are able to replace several units of different configurations and modes of operation conventionally used in bio-medical research equipment, such as flow cytometry machines used in pharmaceutical drug discovery. Zecotek technology and products have been endorsed by tests independently conducted by the U.S. National Institute of Health (NIH).

ZLS has focused its efforts on those lasers that have unique commercial, technical and value-added features and present less resistance to market entry.

#### ***Zecotek Key Product Summary***

- Patented LFS family of advanced scintillation materials;
- Patent-pending MAPD solid-state high-sensitivity photo-detector;
- Patented and patent-pending DOI-enabled scintillation detectors for PET imaging;
- Patented and patent-pending Mini PET/MRI technology;
- Patented and patent-pending 3D/2D auto-stereoscopic multiple-view display;
- Patented and patent-pending widely tunable fiber lasers in the visible spectrum;

#### **Patent Portfolio**

As a result of internal technology development, patent acquisitions and licensing partnerships, the Company's patent portfolio has continued to grow in numbers and technological diversity. As of July 31, 2012, Zecotek owned title to or controlled more than 50 patents and applications.

The following table lists the key patents in Zecotek's patent portfolio.

Key Technology	Patent/App. No	Date Filed	Jurisdiction	Status
LFS scintillation crystals	7,132,060	21-07-05	US	Granted
	2242545	04-11-03	RU	Granted
	PCT/RU2004/000094	12-03-04	PCT, AU, CA, CN, EA, DE, FR, GB, IN, JP, NL	Granted
	1493/KOLNP/2006	12-03-04	IN	Pending
Semiconductor photo-detectors (MAPD)	2316848	01-06-06	RU	Granted
	PCT/RU2007/000287	31-05-07	PCT, AU, CA, EP, IN, JP, KR, MY, SG	Pending
	200780024920.5	31-05-07	CN	N. of Allowance
	200808979-9	31-05-07	SG	Granted
	12/034,603	20-02-08	US	Pending
	61/532,904	09-09-11	US	Pending
PET imaging technologies	7,956,331	27-10-08	US	Granted
	13/232,944	14-09-11	PCT, US	Pending
	PCT/US2009/062108	26-10-09	PCT, US	Pending
	12/544,174	19-08-09	US	Pending
	8,003,948	03-11-08	US	Granted
	PCT/US2008/082273	03-11-08	PCT, AU, CA, EP, JP, KR, CN, EA, IN	Pending
	PCT/US2009/061600	22-10-09	PCT, US	Pending
Visible fiber lasers	13/213,007	18-08-11	US	N. of Allowance
	12/182,951	30-07-08	PCT, US, CA	Pending
Thin-film waveguide lasers	2006119198	02-06-06	RU	Granted
	11/858,857	20-09-07	PCT, US	Pending
Solid-state lasers	12/851,427	05-08-10	PCT, US	Pending
	12/881,033	13-09-10	US	Pending
3D displays	7,944,465	27-02-06	US, CA, AU	Granted
	13/108,249	16-05-11	US	Pending
	11/769,672	27-06-07	US	N. of Allowance
	PCT/IB2007/003309	07-11-07	PCT, CN, IN, JP, KR	Pending
	201070065	07-11-07	EA	N. of Allowance
	7825562.7	07-11-07	EP	N. of Allowance
	61/586,809	15-01-12	US	N. of Allowance

Zecotek's research and development success depends on having a quality portfolio of patents, which are not only technically valuable, but are properly filed and maintained in appropriate jurisdictions. The Company maintains a balanced mix of internal and external patent administration and devotes a significant effort to the administration of its portfolio, ensuring that any applications are duly filed in appropriate jurisdictions.

### Corporate Strategy

Since Zecotek's formation in 2004, it has developed and acquired a significant technology based intellectual property portfolio protected by patents issued or filed worldwide. Furthermore, the Company has integrated a

number of technologies into value-added components and products which it has manufactured in limited production runs.

Zecotek's core business strategy is to commercialize photonic products and technologies through strategic alliances with major corporations. The central objective is to enter growth markets with products featuring competitive costs and performance superiority – leading to above average profits and shareholder returns.

Zecotek brings leading-edge photonics technologies to alliances while corporate partners bring their existing product development, marketing, manufacturing and distribution resources. The product delivery vehicle will be generally a joint venture, structured to clearly identify each partner's contributions, efficiently manage project costs, preserve each partner's IP rights, enable investment by third parties and minimize time to market.

## **Recent Business Activities**

### ***Patents***

Zecotek Imaging Systems Pte Ltd., a wholly owned subsidiary has filed legal action in United States Federal District Court in Los Angeles against defendants Saint-Gobain Corporation and Philips for infringement of Zecotek's U.S. Patent Number 7,132,060. The patent covers the substances and chemical formulations used to grow lutetium fine silicate (LFS) scintillation crystals which are characterized by their combined high light yield and ultra-fast decay times and are typically used in medical scanning devices. The lawsuit alleges that Saint-Gobain's LYSO crystals infringe Zecotek's patent, and that Philips infringes by using those crystals in the PET scanners it sells. Due to the fundamental nature of the patent, management believes that the damages caused by the alleged infringement may be substantial. The Company is diligently pursuing the lawsuit and has retained a dedicated and experienced patent lawyer.

In August 2012 Zecotek received Notice of Allowance from the Chinese State Intellectual Property Office for its Micro-channel Avalanche Photodiode (MAPD) solid-state photo detector. The Chinese Notification for Patent is the second patent granted for the MAPD solid-state photo detector. The first patent was granted by Russia in March 2008. Patents have been filed and are pending in other jurisdictions including the United States.

In July 2012 Zecotek received a Notification for Patent Registration Formalities from the Chinese State Intellectual Property Office for the 3D/2D switchable optical imaging system of the glasses-free 3D auto-stereoscopic display system. This adds to the United States Patent Office Notice of Allowance, and the Eurasian Patent Office Notification on Readiness to Grant a Eurasian Patent, received in May 2012, by the Company, for its 3D/2D switchable optical imaging system for its glasses-free 3D auto-stereoscopic display system. These notices add to the other global patents, including U.S. patent number 7,944,465 covering Zecotek's glasses-free 3D auto-stereoscopic display system, as the Company moves to fully commercialize its innovative 3D technology and other photonics technology.

In August 2012 the United States Patent Office has issued a Notice of Allowance covering a method of data acquisition for positron emission tomography (PET) scanning devices. The data acquisition board and readout system are an important component of PET scanning devices. Zecotek, as principal financier and development partner of various imaging components with the University of Washington, radiology department, has the exclusive license rights for a method of data acquisition and design boards to be used in new generation PET scanners.

***The European Organization for Nuclear Research***

In February 2012 the Company achieved commercial production status in its most advanced solid-state Micro-pixel Avalanche Photo Diode (MAPD) photo detectors MAPD-3N. Following this development CERN, the European Organization for Nuclear Research and important partner and customer of Zecotek, ordered the MAPD-3N for two projects: in April 2012 the ALICE Experiment at CERN, ordered the patented third generation Micro-pixel Avalanche Photo Diodes (MAPD-3N) following the results of a test bench study on the characteristics of the MAPD conducted by the University of Bergen in Norway; and in February 2012 the NA61 Experiment ordered the patented MAPD-3N after completing a 40 day heavy ion experiment with 320 channels of MAPD-3A readout. The conditions within the calorimeter are extreme and during the 40 day heavy ion run the MAPDs did not malfunction.

CERN is one of the world's largest and most respected centres for scientific research studying fundamental physics to determine what the Universe is made of and how it works. At CERN, the world's largest and most complex scientific instruments are used to study the basic constituents of matter — the fundamental particles. There are now five CERN experiments using Zecotek's solid-state MAPD photo detector: the Alice Experiment, the NA612 Experiment, the Swiss Federal Institute of Technology, the Joint Institute for Nuclear Research, and the Compact Muon Solenoid Experiment.

***Sales/Partnerships***

In July 2012 Zecotek announced the selection of the National NanoFab Center (NNFC) to manufacture its patented Micro-channel Avalanche Photodiode (MAPD) solid-state photo detector arrays. The NNFC is a world class nanotechnology and semiconductors center, located in Daejeon City, Korea, approximately 150 km from Seoul. The NNFC has the manufacturing and technological capabilities to meet the growing market demand for MAPD and to provide technical support and service for future MAPD upgrades.

In February 2012 Zecotek announced a joint development agreement with NuCare Medical Systems of Seoul, Korea to integrate a high performance positron emission tomography (PET) medical scanning device using Zecotek's patented LFS scintillation crystals, solid-state MAPD photo detectors and a new data acquisition board and readout system. This followed the announcement in November 2011 when NuCare ordered Zecotek's patented LFS scintillation crystals and arrays for use in a non-destructive assay system and the development of a new positron emission tomography (PET) system. NuCare is known for its innovation in product design and specializes in products in the area of nuclear medical imaging.

In November 2011 Zecotek selected the Beijing Opto-Electronics Technology Co. Ltd. (BOET) to grow and commercialize all versions of its patented LFS scintillation crystals. Founded in 2001, BOET has become a leader in the photonics industry and specializes in the growing, cutting, polishing and the large scale production of crystals. Zecotek selected BOET as its partner as it is known for its competitive cost, continuity of supply and security of intellectual property. BOET is a subsidiary of North-China Research Institute of Electronics-Optics and is partially owned by the Chinese government. It has worked with a number of Canadian companies and other international companies.

In August 2011 a Japanese manufacturer ordered Zecotek's patented LFS scintillation crystals and patented MAPD solid-state photo detectors for trial use in radiation dosimeters. Radiation dosimeters, which are used to measure an individual's or object's exposure to ionizing radiation, can benefit from the unique properties of the LFS scintillation crystals and MAPD photo detectors, providing for devices of higher sensitivity, lower manufacturing costs and less vulnerable to high levels of radiation. Orders have also been received from a

European device developer for a similar application in the detection of x-rays in medical, scientific and industrial use.

#### ***Research & Development & Other Activities***

Zecotek was one of five Canadian companies selected to participate in the Canadian Technology Showcase held on Thursday, February 9, 2012 in Vancouver, BC. The Canadian Technology Showcase was organized by Foreign Affairs and International Trade Canada to highlight Canadian technologies for visiting senior executives from Sony Corp. of Japan. Zecotek presented its patented glasses-free 3D display technology.

In October 2011 LFS-8, the newest version of LFS scintillation crystals, were successfully tested by the University of Washington and by researchers affiliated to CERN. Test results show Zecotek's LFS-8 crystals have achieved an extremely fast decay constants ranging between 15 and 25 nanoseconds depending on chemical compositions with energy resolutions between 7% and 9%. Competing lutetium oxide crystals have structural decay times of no less than 40 nanoseconds, making the LFS-8, by far, the fastest existing scintillation crystal based on lutetium oxide material. This patented formulation is of significant importance to OEM's developing time-of-flight PET scanners for high accuracy imaging. Zecotek's LFS crystals are also characterized by high radiation hardness, making the LFS a prime candidate for high energy physics experiments.

#### ***Financings***

In September 2011 the Company amended the terms of 5,925,000 warrants issued to subscribers of a private placement which closed October 23, 2009. The Company re-priced the exercise price of the subscriber warrants to \$0.65 per common share from the initial exercise price of \$1.00, and extended the expiry date from October 23, 2011 to April 23, 2012. The warrants expired on April 23, 2012.

The Company completed the first tranche of share subscription agreements on September 18, 2012. Under the agreements, the subscribers purchased 4,280,000 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$1,540,800. Each unit consists of one common share and one half of one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.50 per share for a period of 24 months. The exercise period of the warrants is to be accelerated if certain conditions are met.

The Company paid a finder's fee equal to 7% of the gross proceeds of the sales of the shares and issued 299,600 non-transferable finder's warrants. Each finder's warrant is to entitle the holder to purchase one share at a price of \$0.50 for a period of 24 months after the date that the private placements closed. All shares and warrants are to be subject to a four-month hold period.

On October 12, 2012, the Company announced that it has increased the non-brokered private placement by 666,666 units which will result in additional gross proceeds of \$240,000.

#### **Selected Annual Information**

The Company's fiscal year end is July 31. Certain of the comparative figures in the following table have been reclassified to conform to the presentation adopted for 2011.

In addition, certain comparative figures below have been restated as a result of the Company adopting International Financial Reporting Standards (IFRS). A reconciliation of GAAP to IFRS is available in Note 17 of the audited consolidated financial statements for the year ended July 31, 2012.

	<b>Audited Year Ended July 31, 2012</b>	<b>Audited Year Ended July 31, 2011</b>	<b>Audited Year Ended July 31, 2010<sup>(1)</sup></b>
Revenue	\$ 36,535	\$ 57,659	\$ 67,848
Net loss for the year	\$ (5,162,088)	\$ (4,955,534)	\$ (8,088,197)
Net loss per share	\$ (0.08)	\$ (0.08)	\$ (0.13)
Total assets	\$ 722,918	\$ 3,323,166	\$ 508,678
Total long-term liabilities	\$ 1,079	\$ 8,889	\$ 15,263
Cash dividends declared	Nil	Nil	Nil

(1) Represents Canadian GAAP figures.

## Results of Operations

### *Net Loss*

The Company recorded a net loss of \$1,090,450 or \$0.02 per share in the fourth quarter of 2012, compared with \$2,710,702 or \$0.04 per share in the same period of 2011, a decrease of 60%. This is due to an adjustment to accrue the salary and consulting fees in the fourth quarter of 2011 which had been written off in the previous quarters of 2011. A net loss of \$5,162,088 or \$0.08 per share was recorded in the fiscal year 2012 compared to \$4,955,534 or \$0.08 per share in the same period of 2011 resulting in an increase of 4%. The increase in the loss for the year is due to the increase in operational activities.

### *Revenue*

Revenues amounted to \$2,715 in the fourth quarter of 2012 and \$36,535 in the year ended July 31, 2012 compared to \$28,442 and \$57,659 in the same periods in 2011. Current year revenues are from the sales of MAPD transistor packages and LFS scintillation crystals (imaging division) to major companies and organizations that are increasingly testing our products for potential larger scale ramp-up. As the Company has limited sales, revenue fluctuates significantly due to timing of sales.

### *Operating, General and Administrative Expenses*

IFRS requires the presentation of expenses in the statement of operations either by nature of expense or by function. This differs from the Company's previously reported statements in accordance with GAAP, which allowed a combination of both. The Company has chosen to present expenses based on the function of each expense rather than the nature of each expense. As a result, stock based compensation, depreciation of capital assets and foreign currency gains and losses are no longer separately presented on the statement of loss and comprehensive loss. Instead, stock based compensation and depreciation of capital expenses have been split between general and administrative expenses and research and development expenses. Foreign exchange gains and losses on translation of foreign operations are now presented as part of other comprehensive loss.

Operating, General and administrative (“G&A”) expenses amounted to \$797,358 in the fourth quarter of 2012, compared with \$2,004,989 in the same period of 2011, representing a decrease in costs of 60%. This is due to an adjustment to accrue the salary and consulting fees in the fourth quarter of 2011 which had been written off in the previous quarters of 2011. For fiscal year 2012, G&A expenses totaled \$3,955,688, a decrease in costs of 0.7% when compared to \$3,981,716 for the same period in 2011.

Increases or decreases in specific categories for the fiscal year 2012 are:

1. Consulting and other professional fees –increased 7% from \$705,570 to \$758,447 primarily due to an increase in consultants.
2. Insurance –decreased 7% from \$51,876 to \$48,233 due to policy maintenance and lack of claims.
3. Investor relations and filing fees – increased 260% from \$40,118 to \$144,258 as a result of increased investor relations activities.
4. Office and General – increased 55% from \$100,462 to \$155,921 mainly due to an increase in administrative costs.
5. Marketing and promotion – increased 285% from \$11,078 to \$42,688. This increase is due to the marketing expenses the company incurs on an ongoing basis.
6. Rent – decreased 55% from \$415,654 to 186,905 due to lower rents in the new office locations and providing a housing allowance to the CEO instead of renting a house.
7. Salaries and benefits –increased 4% from \$ 1,071,084 to \$ 1,114,108 due to the increase in management salaries.
8. Travel –increased 25% from \$184,072 to \$229,734 due to the increase in efforts to market the technologies

#### ***Research and Development Expenses***

Research and development (“R&D”) expenses amounted to \$295,807 in the fourth quarter of 2012, compared with \$734,155 in the fourth quarter of 2011, representing a decrease in costs of 60%. For fiscal year 2012, R&D expenses totaled \$1,242,935, an increase in costs of 21% when compared to \$1,031,477 for the same period in 2011.

The focus of the research and development projects that are still being currently carried out in Zecotek laboratories are to meet the specifications required by the OEM and adapting and improving our technologies for different applications demanded by the market.

#### ***Stock-based Compensation***

Stock-based compensation expenses amounted to \$292,502 in the fourth quarter of 2012, compared with \$413,520 in the same period of 2011. For fiscal 2012, stock-based compensation expenses totaled \$1,416,301, a decrease in costs of 8.5% when compared to \$1,547,508 for the same period in 2011. The decrease is a result of reduction in compensation of stock option grants to the employees and consultants of the Company.

#### ***Amortization of property and equipment***

Amortization expense for the fourth quarter of 2012 decreased to \$13,823 from \$20,270 in the same period of 2011, a decrease of 32%. For fiscal year 2012, the amortization was \$43,969, a decrease of 3% when compared to \$45,373 for the same period in 2011.

***Amortization of patent costs***

Amortization expense for the fourth quarter of 2012 increased from \$5,719 to \$6,922 in the same period of 2011 representing an increase of 21%. For fiscal year 2012, the amortization was \$27,216 compared to \$25,529 for the same period in 2011.

***Compensation Waivers***

In March of 2011, the Company entered into agreements with certain of its consultants, directors and employees (the "individuals"). Under these agreements, the individuals waived salaries and fees owed to them totaling \$1,113,455 in favour of bonus payments of the same amounts, which are to be paid upon certain triggering events, including a sale of substantially all of the assets of the Company, or the shares of the Company, commercialization of any of the technologies of the Company, a public listing of shares of a subsidiary of the Company, or cash inflows exceeding \$3,000,000 in any three month period.

The liability for this compensation will remain included in accounts payable and accrued liabilities until such time as it can be determined that the liability is legally extinguished or that the Company's obligation to pay is unlikely.

***Related party transactions***

The Company undertook various transactions with related parties as detailed out in Note 14 of the audited consolidated financial statements for the year ended July 31, 2012. These transactions were measured at the exchange amounts which are the amounts of consideration established and agreed upon by the related parties.

**Summary of Quarterly Results**

The following table is a summary of the unaudited consolidated operating results of the Company presented in accordance with IFRS for the last eight quarters. Certain of the comparative figures in the following table have been reclassified to conform to the presentation adopted for 2012.

<b>Quarters ended (unaudited)</b>	<b>July 31 2012</b>	<b>April 30 2012</b>	<b>January 31 2012</b>	<b>October 31 2011</b>
Revenue	\$2,715	\$3,514	\$28,545	\$1,761
Net loss	\$1,090,450	\$1,130,013	\$1,538,736	\$1,410,758
Loss per share	\$0.02	\$0.02	\$0.02	\$0.02
<b>Quarters ended (unaudited)</b>	<b>July 31 2011</b>	<b>April 30 2011</b>	<b>January 31 2011</b>	<b>October 31 2010</b>
Revenue	\$28,442	\$2,037	\$27,180	Nil
Net loss	2,710,702	1,119,210	\$233,508	\$886,896
Loss per share	\$0.04	\$0.02	\$0.00	\$0.02

## Liquidity and Capital Resources

For the year ended July 31, 2012, the Company has a net loss of \$5,162,088 and negative cash flow from operating activities of \$3,279,063 compared to a net loss of \$4,955,534 and negative cash flow from operating activities of \$4,032,575 for the same period in fiscal year 2011. As a result of recurring losses over the Company's history, the Company has accumulated deficit of \$53,242,337 as at July 31, 2012. The accounts payable and accrued liabilities have increased to \$3,153,900 as of July 31, 2012 from \$2,644,888 as of July 31, 2011.

Net cash provided by financing activities in the fiscal 2012 was \$647,314 as compared to \$6,820,983 for fiscal 2011. In 2011, the financing activities consisted mainly of the issuance of shares through a non-brokered private placement. No shares were issued in the fiscal year 2012.

Net cash used by investing activities in the fiscal 2012 was \$99,072 as compared to \$11,598 for the same period in fiscal year 2011. The investment activities include deposit and lease hold improvement.

The Company has suffered recurring losses from operations and currently the revenues do not generate enough cash to sustain its operations. Its ability to conduct operations, including the commercialization of its technologies, development of new technologies and the acquisition of additional technologies is dependent on its ability to raise funds as needed.

At July 31, 2012 the Company had \$126,999 in cash and cash equivalents, a decrease of \$2,730,821 from \$2,857,820 cash and cash equivalents available at July 31, 2011. The consolidated working capital was \$(3,480,894) at July 31, 2012, a decrease of \$3,793,427 from \$312,533 of consolidated working capital at July 31, 2011. The decrease in working capital mainly resulted from the decrease in cash.

The Company has disclosed in Note 1(b) to the financial statements that there was substantial doubt as to the ability to continue as a going concern.

## Share Capital

Set out below is the outstanding share data of the Company as at November 28, 2012. For additional details, see Note 8 of the audited consolidated interim financial statements for July 31, 2012.

At November 28, 2012	Number outstanding
Common shares	72,731,588
Stock options	13,085,000
Common share purchase warrants	8,276,500
Agent's warrants	1,130,920

Outstanding options represent a total of 13,085,000 common shares issuable. At November 28, 2012, 10,641,250 of these options were exercisable and would provide proceeds of \$6,918,313 to the Company if all the vested options were exercised in full. The exercise of these options is completely at the discretion of the holders and the Company has no indication that any of these options will be exercised.

At November 28, 2012 the Company had outstanding 8,276,500 common shares purchase warrants of which 4,450,000 are exercisable at \$0.70 per share expiring on February 9, 2013; 1,686,500 are exercisable at \$0.70 per share expiring on February 17, 2013 and 2,140,000 are exercisable at \$0.50 per share expiring on October 10, 2014.

At November 28, 2012 the Company had outstanding 669,292 agent's and finder's warrants; 621,670 were exercisable at \$0.70 per share expiring on February 9, 2013; 209,650 were exercisable at \$0.70 expiring on February 17, 2013 and 149,800 were exercisable at \$0.50 expiring on October 10, 2014.

### **Subsequent Events**

The Company completed the first tranche of share subscription agreements on September 18, 2012. Under the agreements, the subscribers purchased 4,280,000 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$1,540,800. Each unit consists of one common share and one half of one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.50 per share for a period of 24 months. The exercise period of the warrants is to be accelerated if certain conditions are met.

The Company paid a finder's fee equal to 7% of the gross proceeds of the sales of the shares and issued 299,600 non-transferable finder's warrants. Each finder's warrant is to entitle the holder to purchase one share at a price of \$0.50 for a period of 24 months after the date that the private placements closed. All shares and warrants are to be subject to a four-month hold period.

On October 12, 2012, the Company announced that it has increased the non-brokered private placement by 666,666 units which will result in additional gross proceeds of \$240,000.

On November 3, 2012, 1,386,792 common shares purchase warrants and 124,811 agent's and finder's warrants exercisable at \$0.70 per share expired.

### **Financial Instruments**

(a) Credit risk:

Financial instruments that potentially subject the Company to concentration of credit risks include cash and restricted short term investments. The Company places its cash and restricted short term investments with high credit quality financial institutions. Short term investments are generally held in fixed rate securities. Concentration of credit risks with respect to receivables is limited.

(b) Foreign exchange risk:

Foreign exchange risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate because of changes in foreign exchange rate. The Company has significant operations in Singapore, which gives rise to significant foreign currency translation risks from fluctuations and volatility of foreign exchange rate between the Canadian dollar and the Singapore dollar (SGD). A significant change in the currency exchange rates between the SGD relative to the Canadian dollar could have an effect on the Company's financial performance, financial position and cash flows. The Company does not use derivative instruments to reduce its exposure to exchange rate risk.

(c) Interest rate risk:

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Short-term investments with fixed interest rates include guaranteed investment certificates with original maturities of greater than three months, exposing the Company to interest rate risk. The Company does not use financial instruments to mitigate this interest rate risk.

(d) Liquidity risk:

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they become due. The Company currently settles its financial obligations using cash and cash equivalents. The Company manages its liquidity risk by forecasting cash flows from operations and anticipating any investing and financing activities. Trade and other payables and Loans payable have contractual maturity of 6 months or less.

### Contractual Obligations

The following table summarizes the Company's contractual obligations as at July 31, 2012, and the effect such obligations are expected to have on our liquidity and cash flows in future years. The table excludes amounts already recorded in the consolidated balance sheet as current liabilities and certain other purchase obligations discussed below:

	2013	2014	2015	2016
<b>Rental leases</b>	\$128,595	\$ 68,898	\$ 28,707	\$ -
<b>Research Contracts</b>	\$ 45,942	\$ 50,942	\$ 60,942	\$ 60,942

Purchase orders for third party components, finished goods and other goods and services are not included in the above table. Management is not able to determine the aggregate amount of such purchase orders that represent contractual obligations, as purchase orders may represent authorizations to purchase rather than binding agreements. For the purpose of this table, contractual obligations for purchase of goods or services are defined as agreements that are enforceable and legally binding on the Company and that specify all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction.

The Company has entered into contracts for other outsourced services. However, the obligations under these contracts are not significant and the contracts generally contain clauses allowing for cancellation without significant penalty. The expected timing of payment of the obligations discussed above is estimated based on current information. The timing of payments and actual amounts paid may be different depending on the time of receipt of goods or services, or for some obligations, changes to agreed-upon amounts.

### International Financial Reporting Standards ("IFRS")

On February 23, 2008, the Canadian Accounting Standards Board ("AcSB") announced that all publicly-listed entities will be required to prepare their interim and annual financial statements relating to fiscal years commencing on or after January 1, 2011 in accordance with IFRS. The standard also requires that comparative figures for 2010 be based on IFRS. Accordingly, the Company has adopted IFRS for its fiscal year beginning August 1, 2011 with the year ended July 31, 2012 having been the first set of annual consolidated financial statements prepared in accordance with IFRS. Comparative figures for the year ended July 31, 2011 have been presented, including an opening balance sheet as at August 1, 2010 reconciled from current Canadian Standards ("GAAP") to IFRS. The audited annual consolidated financial statements, which should be read in

conjunction with this discussion, have been prepared in accordance with International Financial Reporting Standards.

The significant accounting policies adopted under IFRS are included in Note 3 to the audited consolidated financial statements for the year ended July 31, 2012. These accounting policies have been applied consistently to all periods presented in the financial statements. They have also been applied in preparing an opening IFRS statement of financial position as at August 1, 2010, the Company's transition date, as required by IFRS 1. The accounting policies have been selected to be consistent with IFRS as is effective on July 31, 2012, the Company's first annual IFRS reporting date.

Reconciliations and descriptions of the effect of the transition from Canadian GAAP to IFRS are included in Note 17 to the audited consolidated financial statements for the year ended July 31, 2012.

### **Audit Committee**

In compliance with the TSX Venture Exchange Policy 3.1 "Directors, Officers and Corporate Governance" section 10.1, the Audit Committee is comprised of three members, David Toyoda (independent), Canada; Dr. Jalil Ali (independent), Malaysia and Dr. A.F Zerrouk (CEO). Mr. Toyoda is the Chairman of the Audit Committee.

David Toyoda is a lawyer with a Bachelor of Commerce degree with honors and serves on several Boards as Director. Dr. A.F. Zerrouk has many years experience serving on the board of high tech organizations, he is a technology developer and scientific entrepreneur and founder of various technology companies. Dr. Jalil Ali has held several faculty and research positions since 1987. He is a member of OSA, SPIE and the Malaysian Institute of Physics and was head of the technology transfer and innovation department at the University Technology Malaysia.

The Audit Committee will serve until the next Annual General Meeting at which time the new Board of Directors will appoint or re-appoint the Audit Committee.

### **Additional Information**

Additional information relating to the Company, including the Annual Information Form and its audited yearend financial statements is available on SEDAR at [www.sedar.com](http://www.sedar.com).