



**ANNUAL INFORMATION FORM**

**For the financial year ended April 30, 2012**

**Dated July 25, 2012**

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## 1.0 PRELIMINARY INFORMATION

### 1.1 General

As used in this annual information form (AIF), unless the context otherwise requires, the terms “we”, “us”, “our”, “COTI” or the “Company”, mean or refer to Critical Outcome Technologies Inc.

Except as otherwise stated, all dollar amounts are in Canadian dollars (CAD).

All information in this AIF is as at April 30, 2012 unless otherwise indicated.

### 1.2 Cautionary Statement Regarding Forward-Looking Statements

This AIF contains certain statements, which constitute “forward-looking statements” (FLS) within the meaning of applicable Canadian provincial securities laws concerning the Company’s plans for its operations and other matters. FLS are by necessity based on a number of estimates and assumptions that are inherently subject to significant business, economic and competitive uncertainties and contingencies. All statements, other than statements of reporting results as well as statements of historical fact, that address activities, events or developments the Company believes, expects or anticipates will or may occur in the future are FLS. These FLS reflect the current expectations or beliefs of the Company based on information currently available to the Company. FLS are subject to a variety of risks and uncertainties that may cause the actual events or results of the Company to differ materially from those discussed in the FLS. Even if such actual events occur or results are realized or substantially realized, there can be no assurance that they will have the expected consequences to, or effects on, the Company.

Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as “expects” or “does not expect”, “is expected”, “anticipates” or “does not anticipate”, “plans”, “estimates” or “intends”, or stating that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved) are not statements of historical fact and may be FLS. The Company operates in a highly competitive and regulated environment involving significant risks and uncertainties, which could cause actual events or results to differ from those reflected in the FLS, including, without limitation: a lack of product revenues and a history of operating losses, dependence on third party synthesis and contract research organizations, the ability to develop proprietary compounds and obtain patent protection for these products, risks related to protecting trade secrets and proprietary expertise, uncertainties related to research, dependence on key personnel, risks related to defence of third-party intellectual property infringement claims, the ability to negotiate licensing agreements with biotech or pharmaceutical companies, risks related to meeting projected time-frames, risks related to pre-commercialization of potential product, uncertainties related to forecasts, unforeseen emergency situations, risks related to legislative actions, new accounting pronouncements and increased insurance costs, lawsuits related to secondary market liability, dilution of investment for current shareholders, common share price volatility, risks related to pricing of future equity offerings, risks relating to realizing the benefits of Federal and Provincial investment tax credits, no expectation that COTI will pay dividends in the near future, risks related to COTI’s projections and assumptions regarding the anticipated market for its products, competition, ability to obtain regulatory approvals for COTI’s drug candidates, risks relating to government regulation of the manufacture, marketing and sale of COTI’s drug candidates, risks related to healthcare system reforms, risks related to rapid technological change, and other risks and uncertainties related to the Company’s prospects and business strategy described under Risk Factors in this AIF. Should one or more of these risks and

uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in the FLS. FLS are made based on management's beliefs, estimates, and opinions on the date the statements are made and the Company undertakes no obligation to update FLS if these beliefs, estimates and opinions or other circumstances should change except as may be required by applicable securities laws. Although the Company believes that the assumptions inherent in the FLS are reasonable, there can be no assurance that the FLS will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements as FLS are not guarantees of future performance and accordingly readers should not place undue reliance on FLS due to the inherent uncertainty therein.

## **2.0 CORPORATE STRUCTURE**

### **2.1 Name, Address and Incorporation**

The legal and commercial name of the Company is Critical Outcome Technologies Inc. The Company's registered and head office is located at Suite 213, The Stiller Centre, 700 Collip Circle, London, Ontario, N6G 4X8.

COTI is a London, Ontario based company resulting from the amalgamation on October 13, 2006 of Aviator Petroleum Corp. (Aviator), a public capital pool company (CPC), listed on the TSX Venture Exchange (TSXV), and Critical Outcome Technologies Inc., a private company, under the provisions of the *Business Corporations Act* (Ontario). The amalgamation constituted the qualifying transaction for Aviator as a CPC pursuant to the policies of the TSXV. The amalgamated company adopted the name Critical Outcome Technologies Inc. and its common shares were listed and posted for trading on the TSXV under the symbol COT on October 30, 2006.

On November 27, 2007, the Company completed an acquisition of all outstanding common shares in the capital of 3015402 Ontario Inc. operating as DDP Therapeutics (DDP), in which the Company had, up to the date of the acquisition, a 10% ownership interest. DDP was formed in 2005 to develop a library of small molecules discovered by COTI using its drug discovery technology and initially targeted at small cell lung cancer (SCLC).

On May 1, 2008, the Company amalgamated with DDP, its wholly owned subsidiary, under the *Business Corporations Act* (Ontario).

### **2.2 Inter-corporate Relationships**

The Company had no subsidiaries as at April 30, 2012 or the date of this AIF.

## **3.0 GENERAL DEVELOPMENT OF THE BUSINESS**

### **3.1 Three Year History**

During the past three years, the Company has expanded its development capacity and technology platform, further advanced the development of a number of its compounds, established new research projects, concluded two collaborations utilizing its platform technology, CHEMSAS<sup>®</sup>, and developed a list of interested qualified licensing prospects for its lead oncology compound, COTI-2. This was accomplished by executing on the Company's business strategies, hiring experienced and capable employees, engaging qualified, respected, professional consultants and establishing relationships with preferred contract research organizations.

The major events occurring in the general development of the Company's business over the last three years are described below under three headings:

- Product Development
- Board of Directors
- Capital Financing

#### Product Development

In November 2007, the Company announced the acquisition of DDP. The acquisition brought back in house a library of compounds originally discovered by COTI using its CHEMSAS<sup>®</sup> technology and the most developed at the time of acquisition. COTI's current lead oncology compound, COTI-2, was the most advanced compound of this library.

Since the acquisition of DDP, the Company has focused most of its research & development (R&D) program resources on moving COTI-2 forward towards human clinical trials, which will provide both scientific and commercial validation of CHEMSAS<sup>®</sup>. These R&D experiments included:

- broadening the therapeutic indications for COTI-2 beyond SCLC both as a single agent and in combination therapy;
- assessing the efficacy and toxicological outcomes of COTI-2 through both *in vitro* and *in vivo* testing;
- determining the primary mechanism of action (MOA); and,
- identifying an oral formulation for the final investigational new drug (IND) studies and ultimate use in a Phase 1 human clinical trial.

The major achievements from these R&D efforts are summarized below.

#### *Fiscal 2010*

- (a) In May 2009, the Company announced positive results from animal experiments providing strong supportive evidence for the evaluation of COTI-2 in combination with conventional first line single agent therapy, Paclitaxel<sup>®</sup>, for the treatment of endometrial cancer. Up to 40% complete tumor regression was observed in the combination treatment groups (Paclitaxel<sup>®</sup> plus COTI-2) while no complete regressions occurred in the Paclitaxel<sup>®</sup> alone treatment group. The combination treatment with Paclitaxel<sup>®</sup> plus COTI-2 was associated with a statistically significant improvement in absolute survival compared with the Paclitaxel<sup>®</sup> alone group. The tumor growth inhibition was 71.5% greater in the Paclitaxel<sup>®</sup> plus COTI-2 treated animals compared with Paclitaxel<sup>®</sup> alone. The combination treatments were well tolerated.
- (b) In July 2009, the Company announced positive results from animal experiments providing strong supportive evidence for the evaluation of COTI-2 in combination with conventional single agent therapy, Doxil<sup>®</sup>, for the treatment of ovarian cancer. Tumor growth inhibition was significantly greater in the COTI-2 plus Doxil<sup>®</sup> treated animals compared to the Doxil<sup>®</sup> control group treated animals. The effectiveness of the combination treatments with COTI-2 was apparent early in the study (day 4) and

increased throughout the remainder of the study. The combination treatments were well tolerated.

- (c) In August 2009, the Company announced the results of *in vitro* experiments designed to assess the toxicity of COTI-2 in healthy human white blood cells (WBCs). A comprehensive evaluation of more than 25 sensitive human cancer cell lines indicated that these cells were between 500 and 3.3 million fold more sensitive to apoptotic cell death induced by COTI-2 compared with normal WBCs harvested from healthy human subjects. Traditional anticancer drugs have shown toxicity to both cancer cells and healthy tissues with little selectivity. These results provided evidence that COTI-2 was much more toxic to cancer cells than healthy human WBCs.
- (d) In August 2009, the Company also announced positive test results from a series of experiments in ovarian cancer designed: first, to estimate the oral maximum tolerated dose (MTD) for COTI-2; second, to evaluate the effectiveness of oral COTI-2 alone; and third, to compare the effectiveness of oral COTI-2 plus Doxil<sup>®</sup> to that of Doxil<sup>®</sup> alone. Oral COTI-2 alone and in combination with Doxil<sup>®</sup> showed superior treatment results compared to Doxil<sup>®</sup> alone as measured by significant tumor growth inhibition in an animal model of an aggressive human ovarian cancer (A2780).
- (e) In December 2009, the Company announced positive results from animal experiments providing strong supportive evidence for the evaluation of COTI-2 as a single agent or in combination with conventional single agent therapy, Gemcitabine<sup>®</sup>, in the treatment of human pancreatic cancer. Results of these experiments indicated that chronically administered oral COTI-2 was well tolerated as a single agent with efficacy comparable to the first line agent Gemcitabine<sup>®</sup> and there was enhanced efficacy when dosed in combination with Gemcitabine<sup>®</sup>.
- (f) In January 2010, the Company announced that oral COTI-2 was effective in a second animal model of human pancreatic cancer (PANC-1) as a single agent and in combination with Abraxane<sup>®</sup>. Chronic oral treatment with COTI-2 as a single agent or in combination with Abraxane<sup>®</sup> was well tolerated with no treatment deaths or observable toxicity over the duration of the study.
- (g) In January 2010, the Company also announced a development agreement with the Translational Genomics Research Institute (TGen) of Scottsdale, Arizona to work together to obtain FDA approval to begin clinical trials for COTI-2. TD2, TGen's drug development subsidiary, would work with COTI to complete the IND enabling research necessary to gain United States (US) Food and Drug Administration (FDA) approval for clinical trials. This agreement was terminated in January 2012 in accordance with the cancellation clause in the agreement whereby COTI could terminate should it not be able to raise sufficient funding to proceed with completing the COTI-2 preclinical development program with TGEN/TD2.
- (h) In March 2010, the Company announced results from a series of animal experiments with COTI-2 as a single agent against an aggressive strain of triple negative human breast cancer (TNBC), (MDA MB 231luc). None of the study groups had any evidence of metastatic disease spread using whole body fluorescent imaging. Treatment with oral COTI-2 as a single agent was well tolerated with no treatment deaths or observable

toxicity over the duration of the study. The results supported further evaluation of COTI-2 in combination with other agents like taxols for the potential effective treatment of TNBC.

#### *Fiscal 2011*

- (i) In May 2010, the Company announced the receipt of a favourable Pre-Investigational New Drug gap analysis report from an independent team of scientific and regulatory consultants that reviewed the novel oncology drug candidate preclinical science data package of COTI-2. There were no deficiencies identified. A gap analysis is typically conducted prior to an initial meeting with the US FDA to identify potential deficiencies in the preclinical development program of a new chemical entity being considered for human clinical trials.
- (j) In April 2011, the Company announced that it was commencing work on three key milestone/risk reduction studies identified by potential licensing partners. The studies included:
- A pharmacodynamic xenograft study designed to demonstrate that AKT/AKT2 is a target for COTI-2 in the intact organism with a human tumour that is known to produce increased amounts of AKT.
  - The identification and validation of an optimal oral formulation for COTI-2 to be used for IND enabling acute toxicity studies in two animal species and Phase 1 human trials.
  - IND enabling acute toxicity studies in two animal species using the oral formulation of COTI-2.
- (k) In April 2011, the Company also announced the results of experiments demonstrating clear evidence of COTI-2's ability to inhibit significantly the growth of cancer cells that over express AKT/AKT2. The results established a clear relationship between the dose of COTI-2 and reduced levels of AKT/AKT2 protein, activated AKT/AKT2 in tumor tissues, observed tumor growth inhibition, and confirmed it as a promising targeted therapy candidate.

#### *Fiscal 2012*

- (l) In May 2011, the Company announced the initiation of its project to identify an oral formulation of COTI-2 for use in humans that would maximize the amount of an orally administered dose absorbed into the body. Xcelience Formulation Development, LLC of Tampa, Florida, with a track record of success in formulating more than 100 development stage small molecules for clinical use, commenced this study in mid-May 2011.
- (m) In June 2011, the Company announced preliminary results for the COTI-2 pharmacodynamic (PD) animal experiments announced in April 2011. COTI-2 demonstrated significant single agent efficacy in an animal model of human ovarian cancer using a cancer cell line (Ovcar-3) that specifically over-expressed AKT. These initial results provided strong supportive evidence for the continued development of



COTI-2 as a first line, single agent therapy for the treatment of ovarian cancers over-expressing AKT.

- (n) In October 2011, the final results of the PD studies were announced confirming that treatment with COTI-2 produced the expected changes in important proteins including GSK3 $\beta$  and caspase-9 that are known to be direct phosphorylation targets for AKT/AKT2. Importantly, COTI-2 produced increased levels of activated caspase-9 which promotes apoptosis (cell suicide) in susceptible cancer cells. Moreover, the available single dose pharmacokinetic data from this study indicated that once-daily oral therapy with COTI-2 may be optimal. These detailed results were highlighted during a November 2, 2011 podium presentation given by Dr. Wayne Danter at a scientific conference, Discovery on Target: Emerging Targets for the Kinase Inhibitor Pipeline, in Boston, MA.
- (o) In February 2012, the Company announced the development of eight oral formulation candidates for COTI-2 as potential Phase 1 oral formulations. This was identified as the second risk reduction milestone in discussions with potential licensees. The next step in the formulation process was to select the best candidate from the group based upon a number of criteria including ease of manufacturing, efficacy, and pharmacokinetic profile, including bioavailability. The final candidate will be used to complete the two species toxicity testing for the COTI-2 IND submission package and in the Phase 1 human clinical trial.
- (p) The oral formulation work also produced a more detailed understanding of how COTI-2 is likely to behave in the body. Experiments involving two rodent species demonstrated orally administered COTI-2 is handled in a complex but common way that produces sustained levels of COTI-2 in the blood for at least 48 hours after a single dose. This suggests COTI-2 can be developed as an out-patient cancer therapy taken daily or even on alternate days. A daily oral medication is usually considered optimal for home based patient administration because of the ease of patient compliance.
- (q) Also in February 2012, the Company announced the engagement of Algorithme Pharma Inc. of Montreal, Canada, an internationally recognized contract research organization to develop a validated detection method for measuring COTI-2's concentration in human plasma. The development and validation of a bioanalytical method for COTI-2 in human plasma represents another important milestone in the preparation of COTI-2 for its first human study and is one of the Company's final requirements for the Phase 1 clinical study submission.

The next steps in the development of COTI-2 toward licensing and an IND filing in calendar 2013 appear under section 3.4 Future Plans.

In addition to COTI-2 R&D, the Company had the following major developments in other R&D areas during the past three years:

#### *HIV Integrase Program*

In September 2008, the Company announced it had entered into an agreement with a major pharmaceutical company (Partner) to advance up to six drug candidates from COTI's HIV-1 integrase inhibitor program, identified using its CHEMSAS<sup>®</sup> drug discovery process.

In April 2010, the Company reported the completion of synthesis and delivery of three novel HIV-1 integrase inhibitors under the agreement and that the Partner was going to move forward with preclinical experiments expected to be completed in the fall of 2010.

In May 2010, the Company reported the completion of initial confirmatory *in vitro* testing of the first three novel scaffolds from this program. All three scaffolds demonstrated good inhibitory activity in a biochemical HIV integrase assay at nanomolar concentrations. Based on these results, COTI filed composition of matter patents and advised its intention to proceed with the next phase of the project consisting of optimizing a small series of potential lead candidates based on these scaffolds.

On May 5, 2011, the Company announced that its agreement had concluded with its major pharmaceutical Partner as the Partner advised they were suspending all HIV programs that were not in an advanced stage in the clinic. COTI believes the program should continue based upon the positive results from the first phase of the program. These results included a novel HIV integrase compound unlike the diketo acid type moiety approach of current therapy in use or in development, an entirely new binding mode that may be advantageous for patients who are resistant to the current class of HIV integrase inhibitors, interaction with the active site of the viral enzyme and initial confirmatory *in vitro* testing demonstrating good inhibitory activity in a biochemical HIV integrase assay at nanomolar concentrations. COTI advised that further development of this program was put on hold pending identification of a new pharmaceutical partner and the necessary internal resources to continue.

#### *Acute Myelogenous Leukemia (AML) Program*

In June 2010, the Company announced it had signed a Contribution Agreement (CA) that provided COTI with non-repayable funding of up to \$300,000, in addition to technical and business oriented advisory services from the National Research Council of Canada Industrial Research Assistance Program to support its AML program. The AML program had an estimated total cost of \$955,470 to develop novel multi-kinase targets for the treatment of AML.

On July 28, 2011, the Company announced that it had initiated synthesis on compounds from the AML program, representing a positive step forward in the development of these promising new drug candidates.

In January 2012, the Company announced the successful completion of compound synthesis from its AML program and that it had initiated confirmatory preclinical tests.

At April 30, 2012, the Company had received financial contributions under the CA of \$110,958. Subsequent to April 30, 2012, the Company received notice of approval for funding under the CA of \$100,000 for the period April 1, 2012 to March 31, 2013, based upon the federal government's fiscal year.

## Board of Directors

In January 2010, Mr. Mark Hlady, a Director of the Company, resigned from the Board for personal reasons. Mr. Hlady had been a Director of the Company since October 2006 and joined the Board as one of the founders of Aviator.

Also in January 2010, Dr. Rainer Engelhardt, another Director, accepted a position as Assistant Deputy Minister, Infectious Disease and Emergency Preparedness Branch of the Public Health Agency of Canada and, in accordance with the employment conflict of interest policies of the Government of Canada, resigned from the Board. Dr. Engelhardt had been a Director of the Company prior to and after the going public transaction that occurred in October 2006.

In March 2011, Mr. Michael Cloutier resigned from the Board in accordance with the terms of his appointment as President and CEO of the Canadian Diabetes Association and their conflict of interest policy. Mr. Cloutier had been a Director since September 2008 following a long career in senior roles in the pharmaceutical industry.

Also in March 2011, Dr. Brent Norton was appointed a Director of the Board. Dr. Norton is an accomplished leader in the Life Science industry with significant leadership experience as a Founder, President, CEO and Director of several successful Life Science companies. His addition to the Board brought significant experience in strategy, licensing and financing as well as contacts in the biotech and life science start-up phase.

On July 11, 2012, the Company strengthened the pharmaceutical industry experience of the Board with the appointment of Mr. Thomas Wellner. Mr. Wellner is the President and CEO of CML Healthcare Inc. (TSX: CLC), an Ontario based publicly-traded provider of laboratory testing and medical imaging services. From 2008-2011, Mr. Wellner was President and CEO of Therapure Biopharm Inc., a private biopharmaceutical development and contract manufacturing company based in Mississauga, Ontario. Mr. Wellner brings a broad range of leadership experience gained from 20 years with Eli Lilly & Co. in senior roles in Canada, China, the US, Latin America and the United Kingdom that included being General Manager of Lilly Deutschland GmbH from 2004-2007.

## Capital Financing

The Company completed three securities offerings on a private placement basis with accredited investors during the past three years. A history of these transactions is summarized in Table 1.

Table 1: Three Year History of Capital Financing

Fiscal Year	Description	Gross Proceeds	Net Cash Proceeds
2010	Private placement <sup>(1)</sup>	\$ 1,102,850	\$ 1,031,923
2011	Private placement <sup>(2)</sup>	2,000,000	1,867,056
2012	Private placement <sup>(3)</sup>	1,800,000	1,640,721
	Total	\$ 4,902,850	\$ 4,540,572

### Notes:

<sup>(1)</sup> In April and May 2010, the Company completed a non-brokered private placement in two tranches and issued 3,151,001 units at a price of \$0.35 per unit for gross proceeds of \$1,102,850. Each unit consisted of one common share and one-half a common share purchase warrant with each whole warrant exercisable into one additional common share at a price of \$0.55 until October 27, 2011 for

the first tranche and November 27, 2011 for the second tranche. In addition, 106,250 compensation warrants exercisable for one additional common share at a price of \$0.40 were issued with expiry dates of October 27, 2011 for the first tranche and November 27, 2011 for the second tranche.

- (2) In March and April 2011, the Company completed a private placement in three tranches and issued 12,500,000 units at a price of \$0.16 per unit. Each unit consisted of one common share and one common share purchase warrant with each warrant exercisable into one additional common share at a price of \$0.30 for 18 months following the closing date of each tranche. In addition, 507,500 compensation warrants exercisable for one additional common share at a price of \$0.30 were issued. Expiry dates for the common share purchase warrants and the compensation warrants from each tranche are September 24, October 6, and October 20, 2012, respectively.
- (3) In March and April 2012, the Company completed a private placement in three tranches, closing on March 23, April 10, and April 27, 2012, respectively. Under the private placement, the Company issued 11,250,000 units consisting of one common share and one common share purchase warrant at \$0.16 per unit for gross proceeds of \$1,800,000. Each common share purchase warrant is exercisable into one common share at a price of \$0.30 for 18 months following the closing date of each tranche. The compensation warrants are exercisable into one additional common share at a price of \$0.30 for 18 months following the closing date of each tranche. Expiry dates for the common share purchase warrants and compensation warrants from each tranche are September 24, October 11, and October 28, 2013, respectively.

### **3.2 Significant Acquisitions**

The Company made no business acquisitions in the fiscal year ended April 30, 2012.

### **3.3 Recent Developments**

On May 2, 2012, the Company announced that it had retained SectorSpeak Inc. (SSI) to provide strategic investor relations and communications services on behalf of the Company. SSI is a Winnipeg based capital markets consulting firm focused on the technology, clean tech, and health sciences sectors. This addition supplements the Company's management team and recognizes that a formal approach must be taken to investor relations at this stage of the Company's development.

### **3.4 Future Plans**

The Company's operational objectives for fiscal 2013 are as follows:

#### *COTI-2*

To complete the remaining scientific experiments announced in May 2011 that address risk reduction points common to prospective licensees as follows:

- (a) Complete the identification of an oral formulation for COTI-2 that can be used for the final acute toxicity studies in completing the IND enabling experiments and a Phase 1 clinical study.
- (b) Start and complete the acute toxicity studies in two animal species using the selected oral formulation of COTI-2.

To complete additional testing and prepare the IND submission package to the FDA with major activities as follows:

- Formulation development analyses (CMC)
- Bioanalytical detection method analysis
- hERG testing – GLP and non-GLP
- MOA testing – iron chelation, cancer stem cells, mTOR rictor
- Efficacy study on final oral formulation including comparison to Merck's MK2206
- FDA meeting pre-IND submission
- Phase 1 test protocol preparation
- Investigator's brochure preparation to be submitted with IND for Phase 1
- IND submission writing
- Electronic submission of IND

To move licensing discussions forward to a licensing agreement based upon the test outcomes from the above noted testing.

#### *R&D Collaboration*

To launch at least two co-development initiatives undertaken on a fee for service model for customer driven targets using CHEMSAS®.

#### *AML Program*

To undertake *in vitro* and *in vivo* testing as follows:

- Selection of candidates from the six compounds synthesized in January 2012 based upon initial efficacy and kinase screens completed in the fourth quarter of 2012
- Synthesis of additional test quantities of the selected compounds
- Complete a binding kinase inhibition assay
- Conduct *in vitro* ADMET studies
- Conduct an *in vitro* cellular inhibition assay
- Conduct *in vivo* efficacy studies and an MTD study

Initiate qualification discussions with the list of prospective licensees as the scientific data package builds with the objective of achieving an out-license or co-development of the program.

#### *Financing*

In order to realize these objectives, the Company will require additional funding. Specific funding sources may include a licensing agreement for COTI-2, additional equity capital raises, government funding or convertible debt.

## 4.0 DESCRIPTION OF BUSINESS

### 4.1 General Description of the Business

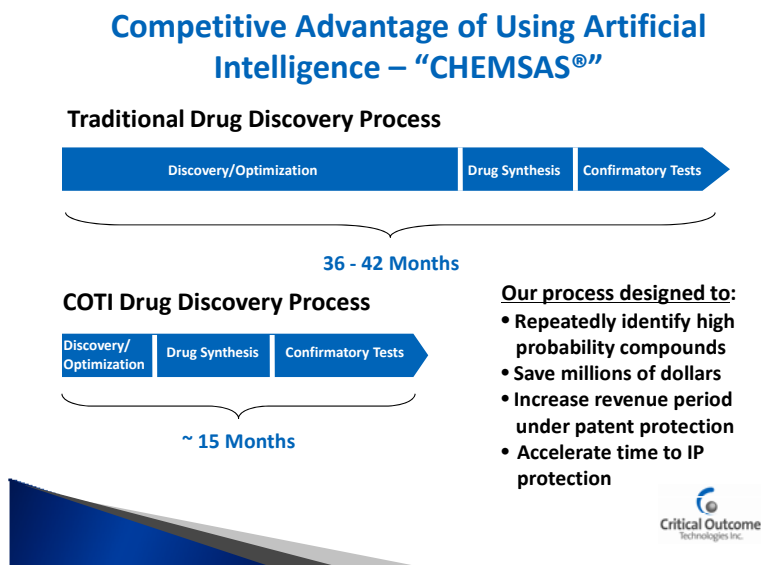
COTI is a biotechnology company focused on applying its proprietary computer-based technology, CHEMSAS<sup>®</sup>, combined with expert medicinal chemistry, to identify, profile, optimize, select and validate commercially viable drug candidates at the discovery stage of preclinical drug development and thereby reduce the timeline and cost of getting new drug therapies to market.

### 4.2 Business Value Proposition

In the 2006 Industry Report of the Pharmaceutical Research and Manufacturers of America (PRMA Report), it was noted that the current drug development process takes 10-15 years, costs approximately US\$800 million and forces companies to evaluate more than 5,000 potential drugs for each successful FDA new drug approval. Since that time, various sources, such as Recap.com, have reported this cost has grown to over US\$1 billion. One of the major factors that causes development to be so expensive is that in traditional drug discovery and preclinical drug development, the evaluation of compounds relies on a costly cycle of drug design and synthesis; followed by drug testing; followed by optimization; followed by re-synthesis and testing of each compound as it is optimized. This repetitive cycling consumes significant resources of time, labour, material and facilities and as a result is correspondingly expensive and inefficient. COTI has developed a better way to get safe and effective new therapies to patients in a more cost effective, efficient and timely manner.

Our approach is disease specific drug discovery, optimization and preclinical development using a proprietary process that combines a series of computer models based on proprietary algorithms, “Artificial Intelligence” software and input from human medicinal chemists. Figure 1 highlights the traditional drug discovery process and timeline and illustrates that COTI’s process called CHEMSAS<sup>®</sup> is designed to reduce the discovery optimization segment and thereby reduced the timeline of identifying lead compound candidates at the end of the confirmatory test stage to approximately 15 months from the current 36 to 42 month timeline.

Figure 1: Comparison of the Discovery/Optimization Timeline



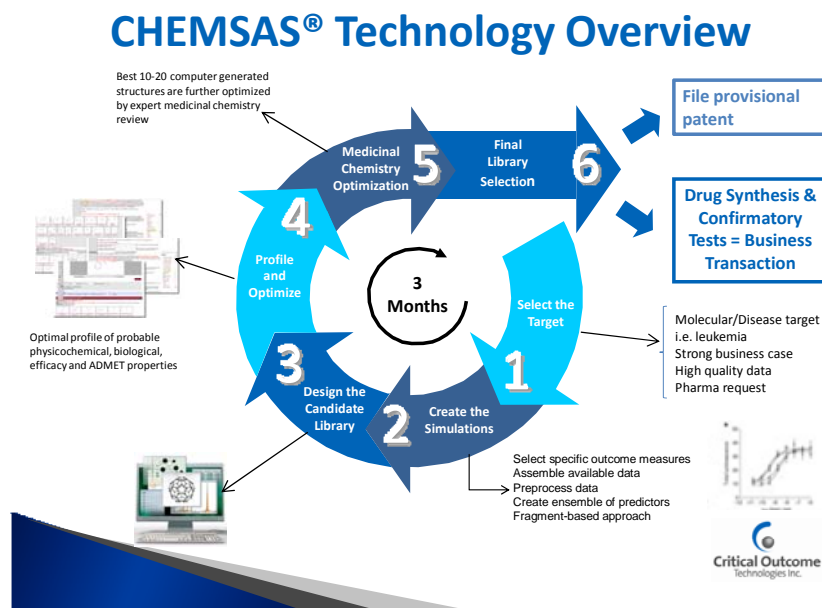
### 4.3 CHEMSAS® Technology

CHEMSAS® is an acronym for “computerized hybrid expert molecular structure activity screening”. The name is derived from the basic underlying principal that guided the development of the Company’s technology that molecular structure determines biological activity. Using this basic principle, the Company applied a proprietary process framework and a significant number of computer based software technologies to create a multi-staged process. CHEMSAS® is thus a platform technology based upon a hybrid of computational technologies and proprietary algorithms that allows accurate prediction of biological activity from the molecular structure.

CHEMSAS® was designed and implemented as a small molecule drug discovery engine that is adaptable to a wide range of targets and profiling possibilities. In addition to increasing the speed of identifying potential lead drug candidates, CHEMSAS® is expected to identify drug candidates with an increased probability of clinical success through its rigorous computational predictive capabilities. The process can model and optimize specific desirable biological activities of molecules such as (i) efficacy against specific targets, (ii) pharmacokinetic properties (i.e., absorption, distribution, metabolism, excretion (ADME)), (iii) Cytochrome P450 metabolic interactions, (iv) acute *in vivo* intra-peritoneal and oral toxicity, (v) P-glycoprotein transport interactions, and (vi) potential mutagenicity. The output of the system is a detailed predictive profile of a potential drug candidate at the earliest stage of development.

Figure 2 sets out a high level overview of the basic steps in the CHEMSAS® process.

Figure 2: CHEMSAS® Technology Overview



To ensure that CHEMSAS® remains a cutting edge technology, new and/or modified prediction models are constantly updated and refined. New molecules are continuously added to the CHEMSAS® database and new computational versions of tests and assays are being developed in order to make the CHEMSAS® predictive capabilities as comprehensive as possible and to allow COTI to find molecules for new and important therapeutic targets that can be developed and sold or licensed.

#### 4.3.1 Benefits of CHEMSAS®

Our approach to drug discovery has the following benefits:

- (a) allows us to discover and develop potential new therapies faster, cheaper and more efficiently by doing most of the discovery work in computer simulations providing decreased cost and increased speed of outcome than those who still rely on traditional or quasi-traditional methods.
- (b) attractive to pharmaceutical and biotechnology partners because of:
  - a faster time to market – lead compounds can complete the preclinical work and get in to clinical trials two or more years faster than the traditional approach;
  - an increase in potential profit by reducing the cost of lead compound identification for prospective licensees compared to more expensive and time consuming internal drug discovery processes; and,
  - an increase in the potential revenue generating period under patent protection – faster time to market allows a greater period for revenue generation under patent protection of potentially more than two years.

#### 4.3.2 Proof of Concept

The CHEMSAS® process has undergone repeated internal and external multi-stage scientific validation throughout its evolution from a process that was limited to predicting *in vitro* efficacy against 10 different types of cancer in 1999 to a sophisticated broad based discovery engine targeting potential new drugs for preclinical development in a wide range of diseases using a broad base of scientific factors. The development of individual computerized simulations involved extensive internal validation at each stage in the development process. The earliest external scientific validation was carried out in 2003 on two COTI compounds identified as potential treatments for leukemia at the Research Laboratories of the London Regional Cancer Program by the Program's Director, Dr. James Koropatnick, an internationally recognized expert in cancer biology. The overall predictive accuracy of these early efficacy models was greater than 90%. A second external and blinded validation was carried out on 10 previously unseen test molecules provided by Dr. Koropatnick with the resulting overall computer predictions of both *in vitro* efficacy and acute animal toxicity being accurate more than 80% of the time. All predictive models have undergone considerable evolution and development since those early experiments. Today, an optimal overall predictive profile is based upon 64 simulations and 264 variable outcomes that help to distinguish potential successful from unsuccessful drugs.

#### 4.4 Business Application

Our vision is to be a reliable and cost-effective provider of portfolios of highly optimized compounds that are targeted against common and important diseases, and which will help drug development customers fill their pipelines with drug candidates that have an increased probability for success in clinical trials and ultimately becoming drug therapies. Using CHEMSAS®, the Company is developing optimized novel, small molecules as potential drug candidates for specific therapeutic targets in diseases that have high morbidity and mortality rates and currently have either poor or no effective therapies. Following synthesis and completion of a standard group of confirmatory *in vitro* and *in vivo* efficacy and toxicity tests, the Company's business model is to license or co-develop these molecules with interested



pharmaceutical, biotechnology, and drug development partners for further drug development and human trials.

In addition to licensing its targeted programs, the Company may also take particularly promising individual molecules forward through various preclinical tests and Phase 1 clinical trials. This activity involves additional preclinical testing and the associated costs with making an investigational new drug application (IND filing) in the United States or a new drug submission (NDS) in Canada and a plan for human Phase 1 clinical studies. These compounds are then available for licensing or co-development with a pharmaceutical partner. In this regard, the Company continued to prepare for a Phase 1 clinical trial submission based on the positive preclinical results achieved from COTI-2 against a number of cancer indications in fiscal 2012. COTI-2 is an allosteric inhibitor of AKT/AKT2 that has shown positive preclinical test results in a broad number of cancers where elevated levels of AKT are exhibited. Testing initiatives and planning currently target an IND filing in calendar 2013.

The Company is also pursuing discovery stage collaborations with multinational pharmaceutical and biotechnology organizations in identifying lead drug candidates for targets of commercial interest to these prospective partners. This collaboration approach leverages the capabilities of CHEMSAS® to provide an additional revenue stream that complements the Company's concurrent development of its own novel drug candidates. The Company's preferred commercialization strategy for collaborations incorporates an upfront fee and a shared risk/reward revenue model delivered through a series of milestone payments based on preclinical and clinical test results. Management believes this service offering provides prospective customers with an efficient and effective approach for identifying discovery stage compounds while enhancing value to the Company and its shareholders from the underlying CHEMSAS® technology. To date the Company has participated in two collaborations; one a cancer target and the other an HIV target, and seeks to build further commercial transactions upon these initial engagements and what the Company learned in dealing with these collaborators.

#### **4.5 Licensing Revenue Model**

The Company anticipates generating revenues through licensing of its compounds using a revenue model consistent with that of other biotech and pharmaceutical companies. The licensing agreement typically consists of the following four components: an upfront cash payment upon signing the agreement, development milestones as the licensed compound advances through additional preclinical and clinical testing to FDA approval, commercial milestones on achieving specific sales levels as a drug, and finally, sales royalties.

The Company's initial business model was to license its compounds following the completion of discovery and a core group of confirmatory lab tests. The Company is currently conducting these core tests plus additional preclinical testing including the testing necessary to take a compound through to an IND filing. This will validate CHEMSAS® and provide confidence to licensees of the value of molecules developed using CHEMSAS®. Accordingly, the value of any licensing agreement is a function of many factors such as the compounds impact on the disease target, the novel nature of the compound, the strength of the patent protection, the number of therapeutic indications, and market size, among others factors. Generally, with all other factors being consistent, the value of a licensing agreement increases as one moves a compound with continuing success along the development path toward and through FDA approval. This increase in revenue reflects the decreasing risk that a compound will fail given each hurdle it passes in the development cycle. This increase is typically spread across all the revenue components of the licensing agreement; that is the upfront payment, developmental milestones, commercial milestones, and royalties are all adjusted upward in value as a compound is de-risked.

Typically, the upfront payment in cash is only a small part of the overall deal and the size of this payment varies based upon the development stage of the compound; with preclinical drug discovery candidates' upfront payments being less than Phase 1 ready candidates, Phase 1 candidates less than Phase 2 candidates and so on assuming all factors being equal. As noted above, the terms of the licensing agreement and consequently the upfront payment can be affected by many factors such as the novel nature of the compound (i.e., first in class), market indications, market size, market share potential and competitive treatments.

Also, as noted above under the heading Business Application of the CHEMSAS® technology, the Company is developing drug candidates for specific therapeutic targets in diseases that have high morbidity and mortality rates and currently have either poor or no effective therapies. The intent of this strategy is directly aimed at those markets with a strong potential for achieving financially rewarding licensing agreements and meeting a specific customer need.

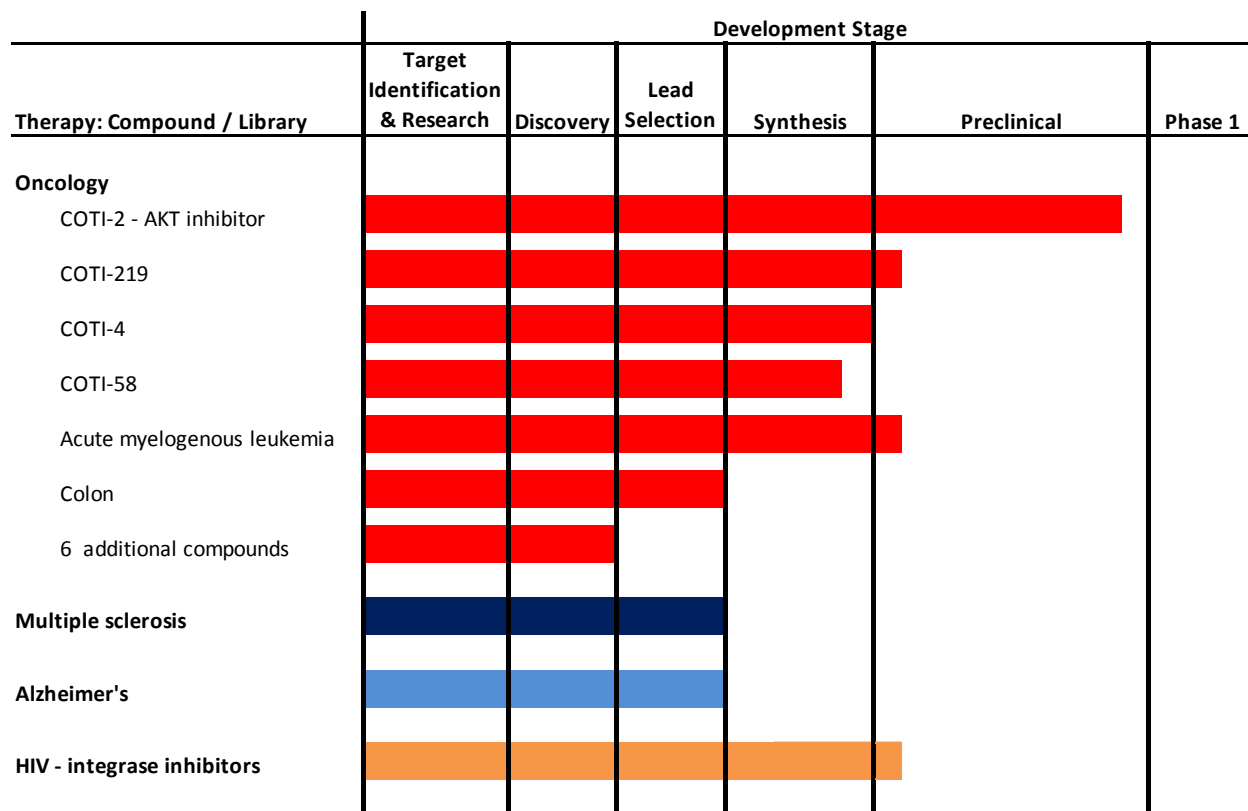
The above discussion is intended only to provide a general outline of how licensing agreements typically work and some of the many factors that could influence any licensing agreement that COTI is able to achieve.

Revenues from collaboration projects are expected to follow a similar approach with the exception of the upfront payment. The payment for the discovery and confirmatory test phase of such initiatives typically has been negotiated on a project-by-project basis. The uniqueness of each project and partner preferences are major factors for this approach. First, if the disease target is a new project directed by the collaborating partner then COTI seeks an upfront service fee to cover the cost of developing the target specific additions to CHEMSAS® and applying the CHEMSAS® process in identifying lead compounds. Negotiated project milestones are used typically to trigger payments. Second, if the collaboration is a compound from COTI's own portfolio then cost sharing or development cost funding by the partner to a specific milestone has been the approach. Licensing revenues similar in nature to those for COTI's own compounds are anticipated under the collaboration approach should the partner decide to proceed following the initial discovery and confirmatory phase.

#### **4.6 Product Development**

Using its proprietary CHEMSAS® process, COTI has discovered and developed highly optimized portfolios of small molecule drug candidates against a variety of different cell signalling and disease targets. COTI has concentrated on developing drug candidates for the treatment of various cancers, HIV, multiple sclerosis, and Alzheimer's disease. Cancer types specifically targeted include small cell lung cancer, acute myelogenous leukemia, ovarian, endometrial, pancreatic, brain, breast and colorectal cancer. The Company's compounds in various stages of development at April 30, 2012 appear in Figure 3.

Figure 3: Product Pipeline and Stage of Development



The ability to develop this pipeline of drug candidates is a function of resources both human and financial. The Company’s development focus is to advance COTI-2 through the completion of the final preclinical testing necessary for an IND filing with the US FDA. The development is supported by the granting of two patents from the United States Patent and Trademark Office (USPTO) during fiscal 2012 as set out in Table 2 below. This development is also supportive of ongoing licensing discussions for the compound.

The Company’s secondary focus is on its AML project. Patents have been granted in Europe and the United States, and government funding to assist with this project is available as noted above.

**4.7 Research and Development**

The Company is continually working on improving its CHEMSAS® platform by adding new simulations, descriptors and tests, as well as enhancing and modifying the latest working version.

The Company has a number of drug compounds and programs whose further development remains on hold or moves modestly forward based upon available funding and internal labour. For example, as CHEMSAS® is a platform technology, the Company is currently evaluating alternative fee for service applications of the technology to meet the needs of a variety of end users for profiling prospective compounds in the discovery stage or at later stages of preclinical development to assist in the decision making process of these users. The basis of such offerings is to address the scientific need to identify potential problems with drug candidates as early as possible and thus save time, resources, and money.

For example, one application is a web portal fee based offering to access CHEMSAS® for a predictive outcome on a single test outcome or a selection of tests of interest to the user. These offerings are currently in the business case evaluation and product prototype phase. Another example, is using its knowledge base, built through drug compound work in oncology with CHEMSAS®, the Company has been developing a computer simulation of a cancer cell designed to run on a tablet that will assist clinicians in personalizing optimal chemotherapy. A provisional patent has been filed on this unique approach.

The Company is exploring a variety of ways to realize value on these compounds and its technologies or further their development through co-development projects.

#### **4.8 Competitive Conditions**

##### *CHEMSAS® Platform*

COTI has developed a unique, novel proprietary process to discover drug candidates predicted to have a high probability of success. For the purposes of finding potential lead compounds for a specific cell level target in a specific therapeutic area there can be many sources of competition. What differentiates these competitors is the scientific capability in their people and technology or process used to arrive at such compounds. Competitors include pharmaceutical companies, biotech companies, drug discovery companies, university research labs, and individual scientists. It is clear that pharmaceutical companies have R&D departments that identify lead compounds in a way unique to each company. However, drug discovery and development is a complex, challenging and expensive activity. This is evidenced by the high cost to bring a successful compound to market of greater than \$1 billion as noted above under the heading Business Value Proposition. Despite competitive processes to find drug therapies, the ultimate goal is to find a successful compound. COTI believes its computational process is a more cost effective and higher success rate approach based upon predictive probabilities. As noted under the heading Intellectual Property below, the Company has chosen not to patent its proprietary process but rather maintain it as a trade secret. The Company firmly believes that CHEMSAS® represents a competitive advantage and that the patenting process would result in a very high risk of providing a detailed roadmap for other parties to follow in engineering a competitive process or in re-engineering/enhancing their own existing process.

##### *Drug Candidates*

In the actual therapeutic space where the products of the CHEMSAS® technology are to be used, there can be treatments in use and in development. COTI's compounds must compete with those in the particular therapy areas COTI has chosen. To enhance its opportunity for success, COTI is focused on areas of unmet medical need; that is, in a therapeutic area where current treatments are not particularly effective. This strategy is further supported in the evaluation of the predictive outcomes for COTI compounds in confirmatory testing. COTI looks to complete the confirmatory tests (efficacy, toxicity, etc.) where possible using human cell lines and compare to current standard therapies used for the disease target. The intent is only to take forward a compound that is at least as good or better in its pharmacokinetic profile than a current therapy. This approach was highlighted under the heading General Development of the Business Three Year History – Product Development above, where animal xenografts conducted in particular human cell lines against specific oncology targets were compared against current first line therapies for these targets. Finally, the Company only takes compounds forward for its own account from the CHEMSAS® system that are able to achieve the highest level of

patent protection, thus ensuring the compounds are unique and novel within the therapeutic patent space and consequently of the most appeal to licensees.

#### 4.9 Intellectual Property

The pharmaceutical industry attaches major importance to patents and the protection of industrial secrets for new technologies, products, and processes. COTI’s success depends in part on its ability to obtain patents or rights thereto, protect its commercial secrets, and carry on its activities without infringing the rights of third parties.

The Company has chosen not to patent its proprietary drug discovery search engine, CHEMSAS®, but rather has kept it a trade secret. This conscious decision serves to protect the process, as disclosure in a patent application would provide other companies with a significant opportunity to improve their own software based modeling systems or create a competing system.

The Company seeks to patent the portfolio drug candidates generated for the selected specific therapeutic targets identified from CHEMSAS® in the most appropriate manner and jurisdictions. The Company also seeks to ensure that these are unique and novel compounds for the disease targets by surveying the patent space around the therapy targets to identify areas of open patent space that would reduce the likelihood of patent issues or challenges at the time of, and subsequent to, filing. COTI’s composition of matter patents typically include the following intellectual property: the therapy target, the relevant molecule scaffolds, the synthesis formula(s) and the supporting test data related to the therapy target and the associated activity claims.

COTI’s approach is to seek protection initially in the United States and Canada and other international regions including Europe on a selective basis under a patent co-operation treaty filing (PCT) filing. Patents filed as of April 30, 2012 have been for compounds targeting various cancer treatments including acute myelogenous leukemia, cancers over expressing the AKT protein complex and HIV integrase inhibitors.

A summary of molecule patents granted is set out in Table 2. There are currently 12 patents pending.

Table 2: List of Patents and Patent Status

	Compound ID	Program Description	Country	Patent Number	Filing Date	Status
1	COTI-001	Protein tyrosine kinase inhibitors	Canada	CA2542007	Oct 9/03	Granted
2	COTI-001	Protein tyrosine kinase inhibitors	US	10/531107	Nov 7/05	Granted
3	COTI-001	Protein tyrosine kinase inhibitors	Europe (8 Countries)	EP1551824	Oct 9/03	Granted
4	COTI-002 /COTI-003	Protein tyrosine kinase inhibitors	Canada	CA2494061	Jul 31/03	Granted
5	COTI-002 /COTI-003	Protein tyrosine kinase inhibitors	US	US2006069105	Jul 28/05	Granted
6	COTI-002 /COTI-003	Protein tyrosine kinase inhibitors	Europe (6 Countries)	EP1542989	Jul 31/03	Granted

	Compound ID	Program Description	Country	Patent Number	Filing Date	Status
7	COTI-2/ COTI-219	Composition and Method for Treatment of Cancer	US	2008/0171744	Jan 11/08	Granted
8	COTI-2/ COTI-219	Inhibitor Compositions and Cancer Treatment Methods	US	12/505,295	Jul 17/09	Granted

The Company has been granted registered trademarks as set out in Table 3.

Table 3: List of Trademarks

	Name	Description	Country	Meaning
1	CHEMSAS®	Acronym for the Company’s proprietary drug discovery search engine	Canada and US	Computerized Hybrid Expert Molecular Structure Activity Screening
2	HAALT®	Acronym for combination oral therapy that results in changing highly lethal cancers into chronic longer term illnesses	Canada	Highly Affective Anti-Neoplastic Longer-Term Therapy

#### 4.10 Economic Dependence

The Company does not currently have any customer that could create a situation of substantial dependence upon them to support the Company’s operations.

In the use of contracted R&D suppliers, COTI has developed a supplier list with several alternative contractors for synthesis and each of the confirmatory *in vitro* and *in vivo* testing services that may be required. Accordingly, the Company has not created a situation of dependence on any supplier for the Company’s requirements.

#### 4.11 Employees

The number of employees on staff at each of the last three year ends is summarized in Table 4.

Table 4: Number of Employees at the End of the Year

Year End	Number
2012	8
2011	9
2010	10

**4.12 Facilities**

The Company does not own any physical facilities but leases 1,600 square feet of commercial office space in the Stiller Centre for Technology Commercialization, a building located at Western University’s Research Park in London, Ontario. This commercial office space is appropriate for the Company’s computer laboratory activities as all physical synthesis and preclinical *in vitro* and *in vivo* testing activities are performed by third party service providers. The Company’s two year lease on this space, at a rate of \$3,115 per month, expired on May 31, 2009, but has been extended since then on a month to month basis subject to a 90 day notice period to terminate by either party.

**5.0 RISK FACTORS**

The biotechnology industry is generally regarded as high risk given the biological and chemical uncertainties inherent in the multitude of testing necessary in developing drug candidates. COTI operates in the earliest stage of the drug development cycle, the discovery stage, which is in the initial preclinical segment of the cycle. The realization of COTI’s long-term potential is dependent upon the successful development and commercialization of molecule drug candidates found using COTI’s proprietary technology and in expanding the use of this technology as a profiling service for third party customers in various ways. The major operating, investment and financial, and industry risk factors affecting realization of this potential are set out by category in Table 5. These are listed in order of seriousness from highest to lowest risk in each category as determined at April 30, 2012. A detailed description of each risk and uncertainty follows the table.

Table 5: List of Categorized Risks

List of Risks by Category		
Operating	Investment & Financial	Industry
<ul style="list-style-type: none"> <li>• Uncertainties Related to Research</li> <li>• Dependence on Third Party Synthesis and Contract Research Organizations</li> <li>• Dependence on Key Personnel</li> <li>• Negotiate Adequate License Deals</li> <li>• Meeting Projected Time-Frames</li> <li>• Uncertainties Related to Forecasts</li> <li>• Pre-commercialization</li> <li>• Trade Secrets and Proprietary Expertise</li> <li>• Patents</li> <li>• Defending Intellectual Property</li> <li>• Legislative Actions, New Accounting Pronouncements, Increased Insurance Costs</li> <li>• Lawsuits Related to Secondary Market Liability</li> <li>• Unforeseen Emergency Situations</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of Product Revenues and Operating Cashflows</li> <li>• Financing Requirements</li> <li>• Access to Capital</li> <li>• Share Price Volatility</li> <li>• Dilution</li> <li>• Income Tax Matters</li> <li>• Dividends</li> </ul>	<ul style="list-style-type: none"> <li>• Rapid Technological Change</li> <li>• Uncertain Markets</li> <li>• Competition</li> <li>• Regulatory Environment</li> <li>• Government Regulation</li> <li>• Healthcare System Reforms</li> </ul>

## 5.1 Operating Risks

### 5.1.1 *Uncertainties Related To Research*

Like other biotech and pharmaceutical companies, COTI's research programs are based on scientific hypotheses and experimental approaches that may not lead to desired results. In addition, the timeframe for obtaining proof of principle and other results may be considerably longer than originally anticipated, or may not be possible given time, resource, financial, strategic, and scientific constraints. Success in one stage of testing is not necessarily an indication that a particular program will succeed in later stages of testing and development. It is not possible to guarantee, based upon studies in *in vitro* models and in animals, whether any of the compounds made for these programs will prove to be safe, effective, and suitable for human use at the clinical stage. Each compound will require additional research and development, scale-up, formulation and extensive clinical testing in humans. Development of compounds may require further investigation into the mechanism of action where this is not fully understood. Unsatisfactory results obtained from a particular study relating to a compound or therapeutic program may cause COTI to abandon its commitment to that compound or program being tested. The discovery of unexpected toxicities, lack of sufficient efficacy, poor physiochemical properties, unacceptable ADME properties, drug metabolism and pharmacokinetics, inability to increase scale of manufacture, market attractiveness, regulatory hurdles, as well as other factors, may make COTI's therapeutic targets, or product candidates unattractive or unsuitable for human use and COTI may abandon its commitment to that program, target, or product candidate. In addition, preliminary preclinical results seen in animals and/or limited human cell line testing may not be substantiated in larger controlled clinical trials.

### 5.1.2 *Dependence on Third Party Synthesis and Contract Research Organizations*

COTI depends on independent preclinical investigators, contract research organizations (CRO) and other third party service providers to conduct synthesis and preclinical tests for its drug candidates and plans to continue to do so in the future. Although the Company does not anticipate any difficulty in obtaining such services, no assurance can be given that the Company will be able to obtain these in a timely and cost effective manner.

The Company relies heavily on these third parties for successful execution of preclinical tests, but does not control many aspects of their activities, as the investigators are not its employees. These third parties may not complete activities on schedule, or may not conduct the testing in accordance with protocols or regulatory requirements. COTI bears responsibility for ensuring that its preclinical testing is conducted in accordance with the quoted scope of the investigational plan and protocols of the required tests.

### 5.1.3 *Dependence on Key Personnel*

The Company's focus is the development of intellectual property. As a result, it depends heavily on the skills and knowledge of certain members of its management, operations, and scientific staff. The loss of service from one or more could adversely affect the operations. In particular, the Company's CSO remains integral to the use of the CHEMSAS® discovery platform as the transfer of this knowledge and expertise remains in transition to a documented system with appropriate training materials for new scientist-technicians.

The Company's ability to manage growth effectively will require it to continue to implement and improve its management systems and to recruit and train new employees. COTI expects operating



expenses and staffing levels to increase in the future once it completes its first licensing deal for COTI-2. There can be no assurance that COTI will be able to successfully attract and retain skilled and experienced personnel as it strives toward its first licensing deal and manage its expanding operations effectively once this commercial transaction is achieved.

#### **5.1.4 Negotiate Adequate License Deals**

The Company's ability to commercialize its products successfully will depend on its ability to negotiate licensing agreements with biotech or Pharma companies for preclinical compounds. While industry reviews of the productivity of pharmaceutical industry R&D spending in generating new compounds indicate pharmaceutical company pipelines are not producing enough successful drugs, there is no certainty that licensing deals can be negotiated for COTI's preclinical compounds. Major pharmaceutical companies are seeking assets with as low a risk profile as possible hence a preference for late stage clinical compounds with lower risk profiles having successfully reached as far as, or through, Phase 3 clinical trials and beyond. While it may seem a reasonable strategy to have a drug development pipeline across the entire development cycle there is no certainty that COTI can be a licensed provider of compounds to the preclinical segment of this pipeline. There is also no certainty that COTI can obtain acceptable licensing terms to indicate a commercially viable market for its products.

#### **5.1.5 Meeting Projected Time-Frames**

COTI sets goals and makes public statements based upon management's best estimates regarding the timing of the accomplishment of objectives material to its success such as the commencement and completion of various preclinical testing and anticipated regulatory submissions. The actual timing of these events can vary dramatically due to delays in achieving successful synthesis, delays or failures in COTI's preclinical testing, failure of CROs to follow testing protocols or deliver their services on a timely and effective basis and macro-events outside the CRO's control such as the availability of *in vivo* test subjects or a mass power outage. There can be no assurance that the Company's preclinical testing will be completed on a timely basis and that COTI will be able to commercialize its products as planned.

#### **5.1.6 Uncertainties Related to Forecasts**

COTI's expectations regarding the success of its drug discovery technology and its business are based upon forecasts that are dependent on external companies and organizations that are not under COTI's control and, as a result, may not be realized. COTI's revenue forecasts are based upon development milestones that COTI needs to achieve in order to be successful. The actual timing of these events may vary significantly due to factors beyond its control such as delays or failures in preclinical or clinical studies, the uncertainties inherent in the regulatory approval process or delays in obtaining customers for the drug candidates. There can be no assurance that licensees will make regulatory submissions or receive regulatory approvals as forecasted or that these will adhere to COTI's forecasted schedule. The failure to do so could have an adverse effect on its forecasts and business success.

#### **5.1.7 Pre-commercialization**

Certain compound libraries or individual compounds are expected to be commercialized in the next few years. While COTI's technology is used to optimize molecules before synthesis and testing takes place, not every molecule that COTI identifies can be guaranteed to be a success in preclinical development as COTI's drug discovery platform, CHEMSAS<sup>®</sup>, is a predictive system providing a probability measure of success. None of such predictions is a 100% guarantee.

Further, competitors may develop alternative products and methodologies to treat the diseases COTI targets and this could reduce the interest in, or desirability of COTI's compounds. Finally, COTI does not know whether any of its potential product development efforts will prove to be effective in humans until such testing is undertaken.

#### **5.1.8 Trade Secrets and Proprietary Expertise**

In addition to patents, COTI relies on trade secrets and proprietary expertise to protect its intellectual property. The Company requires its employees, consultants, outside scientific collaborators and sponsored researchers and other advisors to enter into confidentiality agreements. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with COTI be kept confidential and not be disclosed to third parties except in specific circumstances. In the case of COTI's employees, the agreements provide that all of the technology conceived by the individual during the course of employment with COTI is COTI's exclusive property. Employees are subject to a two year non-competition clause upon departure and at present access to the total CHEMSAS<sup>®</sup> process is restricted such that only one individual, the Chief Scientific Officer, has access to the whole process. These agreements may not provide meaningful protection or adequate remedies in the event of unauthorized use or disclosure of COTI's proprietary information. In addition, it is possible that third parties could independently develop proprietary information and techniques substantially similar to those of COTI or otherwise gain access to COTI's trade secrets.

COTI currently has the right to use certain software technologies under license agreements with third parties. COTI's failure to comply with the requirements of these license agreements could result in the termination of such agreements and this could either cause COTI, on a temporary or permanent basis, to terminate the related development programs and cause impairment or complete loss of its investment in such programs. Under these circumstances, COTI may not be able to rely on its intellectual property to protect its products in the marketplace or its ability to continue to identify new therapies.

#### **5.1.9 Patents**

COTI's success depends to a significant degree on its ability to develop proprietary compounds or libraries of compounds for specific therapy targets and to obtain patent protection for its products in Canada, the United States and other countries. Success also depends, in large part, on COTI's ability to protect its competitive position through maintaining and defending these patents, trade secrets, trademarks and other intellectual property rights. To assist in the successful filing and maintenance of its patents, the Company utilizes external expertise including a patent consultant, patent agent and attorneys and patent annuity service bureaus for the respective legal jurisdictions as deemed necessary.

COTI files patent applications as appropriate for each compound covering the mechanism of action, synthetic process, and therapeutic indication. While COTI seeks to develop molecules that are effective against an unmet medical need and that are in an open patent space, publications of discoveries in scientific or patent journals tend to lag behind the date of the actual discoveries by several months. For this reason, COTI cannot be certain that it will be the first inventor or that it was the first to file a patent application for such invention. Further, because patents can take many years to issue, there may currently be pending applications of which COTI is unaware that may later result in issued patents that its products infringe. Consequently, patents may not be granted for every patent application submitted or such developments could cause financial harm to the business.

COTI cannot assure that patents will be granted on its applications in any jurisdiction, as it has no control over the prosecution of such applications by the patent granting bodies. COTI also cannot assure that the scope of its patents will be sufficiently broad to offer meaningful protection. In addition, issued patents could be successfully challenged, invalidated or circumvented so that COTI's patent rights would not create an effective competitive barrier.

#### **5.1.10 *Defending Intellectual Property***

COTI cannot guarantee that it will not have to defend its intellectual property rights. In the event of an intellectual property dispute, COTI may be forced to defend its intellectual property assets, which could involve litigation or proceedings declared by a patent office or by a trade commission. COTI's involvement in any patent litigation, interference, opposition or other administrative proceedings will likely cause the Company to incur substantial expense and the efforts of its technical and management personnel will be significantly diverted. The abandonment of intellectual property in which COTI has significant investment could even occur. An adverse determination in litigation could subject the Company to significant liabilities.

#### **5.1.11 *Legislative Actions, New Accounting Pronouncements, Increased Insurance Costs***

Compliance with changing regulations regarding corporate governance and public disclosure, most notably the recent conversion of Canadian public entities to International Financial Reporting Standards (IFRS) effective for financial years beginning after January 1, 2011, and internal controls over financial reporting (ICOFR) may result in additional expenses. Changing laws, regulations and standards relating to corporate governance and public disclosure create uncertainty for small public companies such as COTI. These uncertainties coupled with inherent risks in clinical trials, should COTI choose to complete a Phase 1 trial, can result in increased insurance costs.

#### **5.1.12 *Lawsuits Related To Secondary Market Liability***

Recent changes in securities legislation in Canada has made it easier for shareholders to sue the Company and its directors. These changes could lead to frivolous lawsuits that could absorb substantial time, money, resources and attention of the Company's employees or force the Company to settle such claims rather than seek adequate judicial remedy or dismissal of such claims.

#### **5.1.13 *Unforeseen Emergency Situations***

Despite the implementation of security measures, any of the Company's, its collaborators' or its third party service providers' internal computer systems are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failure. Any resulting system failure, accident, or security breach that causes interruptions in its operations could result in a material disruption of its drug discovery programs. To the extent that any disruption or security breach results in a loss or damage to its data or applications, or inappropriate disclosure of confidential or proprietary information, COTI may incur liability as a result. Its drug discovery programs may be adversely affected and the further development of its product candidates may be delayed. In addition, COTI may incur additional costs to remedy the damages caused by these disruptions or security breaches.

## **5.2 Investment and Financial Risks**

### **5.2.1 Lack of Product Revenues and Operating Cashflows**

COTI has not recorded any revenues from the sale of drug compounds or compound libraries since becoming a public company in October 2006. COTI has an accumulated deficit since its inception through to April 30, 2012 of \$16,328,162. This deficit is expected to increase in the near term as COTI continues its product development efforts, develops relationships with prospective customers, and ultimately develops licensing agreements. Operating losses will be incurred until upfront licensing payments, milestone payments and royalty payments are sufficient to generate revenues to fund its continuing operations. COTI is unable to predict with any certainty when it will become profitable, or the extent of any future losses or profits.

Any milestone payments and future royalties arising from the licensing of COTI's products will be decreased or increased by the test outcomes in future development. This is because the results of early preclinical research may not be indicative of the results obtained in later stages of preclinical or clinical research that may affect milestone payments and future royalties. In addition, milestone payments and royalties are subject to the business success or failure of COTI's licensees in developing the product, marketing the product and in remaining profitable themselves.

### **5.2.2 Financing Requirements**

The Company needs to seek additional funds to continue to develop its clinical and discovery programs, develop new revenue streams and to move its compounds more rapidly through development in fiscal 2013 and beyond. The Company intends to raise these funds through public or private equity offerings or collaborations with other biopharmaceutical companies and/or from other sources. There can be no assurance additional funding will be available on terms acceptable to COTI that would lead to the successful commercialization of its products. In addition, the Company has access to funds through the exercise of warrants and stock options should the Company's share price reach levels that will cause such security holders to exercise. There is no assurance that the Company's share price will reach the price levels that will cause such security holders to exercise their rights to acquire shares. If adequate funding is not available, COTI may be required to delay, reduce, or eliminate one or more of its product development programs or obtain funds through corporate partners or others who may require it to relinquish significant rights to product candidates or obtain funds on less favourable terms than COTI would otherwise accept. COTI's success in obtaining future capital requirements will depend on many factors, such as achieving a licensing agreement for COTI-2, establishing and maintaining collaborative partnering relationships and the general economic conditions and availability of capital in the equity markets for biotechnology companies.

### **5.2.3 Access to Capital**

In seeking to raise equity capital, COTI will have to price such equity offerings (Offering) in relation to the current market's perception of value. Among the factors to be considered in determining the price of the Offering are: COTI's future prospects, the market prices of its securities and certain financial and other operating information of companies engaged in activities similar to COTI; the prospects of the industry in general; and COTI's financial and operating record of accomplishment as disclosed in its most recent fiscal periods. Accordingly, the Offering price may not be indicative of the market price for COTI common shares after the Offering, which price may decline below the issue price of the Offering.

#### 5.2.4 *Share Price Volatility*

The Company's common shares are publicly traded and are subject to various factors that may make the Company's share price volatile. A number of factors influence the volatility in the trading price of COTI common shares, including changes in the economy and the financial markets, industry related developments, and the impact of changes in COTI's operations. The market prices for securities of biotechnology-based companies, such as COTI, have been historically volatile.

Numerous factors besides those listed in this AIF, including many over which the Company has no control, may have a significant impact on the market price of common shares including:

- (a) clinical and regulatory developments regarding the Company's products and product candidates and those of its competitors;
- (b) acquisitions, strategic partnerships or joint ventures involving the Company or its competitors;
- (c) other announcements by the Company or its competitors regarding technological, product development, sales or other matters;
- (d) patent or other intellectual property achievements or adverse developments;
- (e) arrivals or departures of key personnel;
- (f) government regulatory action affecting the Company's product candidates in the United States, Canada and foreign countries;
- (g) the Company's operating performance and the performance of competitors and other similar companies;
- (h) the public's reaction to the Company's press releases;
- (i) the breadth of the public market for the Company's common shares;
- (j) changes in local and global economic conditions, general market conditions and fluctuations for the emerging growth and biopharmaceutical market sectors;
- (k) reports of securities analysts regarding the expected performance of the Company or its competitors; and,
- (l) events related to new or threatened litigation should they occur.

In recent years, the stock market has also experienced extreme price and trading volume fluctuations that often have been unrelated or disproportionate to the operating performance of individual companies. These broad market fluctuations may adversely affect the price of common shares, regardless of the Company's operating performance. In addition, sales of substantial amounts of common shares in the public market after any offering, or the perception that those sales may occur, could cause the market price of common shares to decline. Furthermore, shareholders may initiate securities class action lawsuits if the market price of the Company's stock drops significantly, which may cause the Company to incur substantial costs and could divert the time and attention of its management.

#### 5.2.5 *Dilution*

The raising of additional equity capital will result in an immediate and substantial dilution of investment for current shareholders to the extent they do not participate in such financings on a basis to maintain their current ownership position. If warrants of COTI issued in previous years with equity offerings are

subsequently exercised into COTI common shares, an investor could experience further dilution. Similarly, the Company has issued share options as compensation to its board members for their board services and to certain employees, which if exercised, would result in further dilution for current shareholders.

### **5.2.6 Income Tax Matters**

COTI is eligible for investment tax credits (ITCs) in respect of scientific research and experimental development (SRED) expenditures both federally and provincially. There is a risk that the various governments, individually or in concert, could enact changes to the eligibility requirements of such programs that could reduce the amount of ITCs the Company received either as a cash refundable credit or as a credit against future taxes payable. In this regard, the federal government established an independent expert panel led by Thomas Jenkins to review federal support for R&D in 2011. The “Jenkins Report” was released on October 17, 2011, and is currently being reviewed, studied and considered by the government with some initial changes introduced in the March 2012 federal budget.

There is also a risk that the Canada Revenue Agency could conclude upon audit that some or all of the expenditures filed for ITCs were not incurred on SRED activities and, therefore, could reduce or disallow claims for ITCs, resulting in potential repayment of previous refundable ITCs received. Finally, any unused ITCs are eligible to be carried forward for 20 years. These ITC programs are subject to change by the various government levels and may or may not be available in future years or at current credit levels.

### **5.2.7 Dividends**

The payment of dividends in the future will be dependent on COTI’s earnings and financial condition and on such other factors as its Board of Directors considers appropriate. Unless and until COTI pays dividends, shareholders may not receive a return on their ownership of common shares. There is no expectation that the Board of Directors of COTI will pay dividends on the COTI common shares in the near future.

## **5.3 Industry Risks**

### **5.3.1 Rapid Technological Change**

As discussed above, the industry in which COTI operates is characterized by rapid and substantial technological change. There can be no assurance that developments by others will not render COTI’s products or technologies less competitive or that COTI will be able to keep pace with technological developments. COTI’s competitors may develop drug discovery platforms or drug candidates that are competitive or superior products.

### **5.3.2 Uncertain Markets**

Much of COTI’s strategy is based upon the belief that the drug candidates that it is developing have a high probability of becoming effective therapies in areas of unmet medical need. Notwithstanding the estimated market potential for its products and product candidates, no assurance can be given that COTI’s projections and assumptions will prove to be correct owing to, in particular, competition from existing or new products and the yet to be established clinical viability of its identified drug candidates or changes in disease frequency or biology.

The Company believes that there can be many different applications for products successfully derived from its technologies and that the anticipated market for products under development will continue to expand. No assurance, however, can be given that these beliefs will prove to be correct due to competition from existing or new products and the yet to be established commercial viability of such products.

### **5.3.3 Competition**

The biotechnology industry is highly competitive. COTI competes with companies around the world that are engaged in the development of pharmaceutical products. They include: biotechnology, pharmaceutical, chemical, and other companies; academic and scientific institutions; government agencies; and public and private research organizations. Many of COTI's competitors have substantially greater financial and human resources than it does. Accordingly, COTI's success on the buy side is predicated upon finding appropriate licensees and in selecting strong contract research organizations for its preclinical activities. Correspondingly, success on the sell side requires developing multiple relationships with key decision makers at prospective customers in the business development, R&D and C-suite levels to achieve recognition of the value of its compound and technology offerings.

### **5.3.4 Regulatory Environment**

The Company's business model is to license its compounds prior to clinical trials. Licensing revenues are anticipated to include revenues for development and commercial milestones as well as royalties on drug sales. At present, none of the Company's drug candidates has received regulatory approval for commercial sale.

Numerous statutes and regulations govern human testing and the manufacture and sale of human therapeutic products in Canada, the United States and other countries where potential licensees would likely market compounds licensed from COTI. The process of obtaining necessary regulatory approvals is lengthy, expensive, and uncertain.

The completion of the clinical testing of our drug candidates and the obtaining of required approvals are expected to take years and require the expenditure of substantial resources. There can be no assurance that clinical trials will be completed successfully. Clinical trials for COTI's drug candidates require that the licensees identify and enroll a large number of patients having the disease under investigation. Licensees may not be able to enroll a sufficient number of patients to complete clinical trials in a timely manner. Patient enrolment is a function of many factors including, but not limited to, design of the study protocol, size of the patient population, eligibility criteria for the study, the perceived risks and benefits of the therapy under study, the patient referral practices of physicians and the availability of clinical trial sites. If the licensee has difficulty enrolling a sufficient number of patients to conduct the clinical trials as planned, it may need to delay or terminate ongoing clinical trials. Further, clinical trials may be delayed or suspended at any time by the licensee or by regulatory authorities if it is determined at any time that patients may be exposed to unacceptable health risks, including the risk of death, or that compounds are not manufactured under acceptable Good Manufacturing Practice conditions or with acceptable quality. Any failure or delay in obtaining regulatory approvals would adversely affect COTI's potential milestone and royalty payments. No assurance can be given that COTI's drug candidates will prove to be safe and effective in clinical trials or that they will receive the requisite protocol approval or regulatory approval to realize on milestone and royalty receipts.

Further, no assurance can be given that current regulations relating to regulatory approval will not change or become more stringent. There are no assurances the licensee can scale-up, formulate, or

manufacture any compound in sufficient quantities with acceptable specifications for the regulatory agencies to grant approval or not to require additional changes or additional trials to be performed. The agencies may also require additional trials be run in order to provide additional information regarding the safety, efficacy or equivalency of any compound for which the licensee seeks regulatory approval. Foreign markets other than the United States and Canada impose similar restrictions. Even if the regulatory authority approves a drug, COTI may not obtain approval for an indication whose market is large enough to obtain commercial milestone or royalty payments.

#### **5.3.5 Government Regulation**

Even if regulatory authorities approve any of the Company's drug candidates, the manufacture, marketing, and sale of such products will be subject to strict and ongoing regulation. Compliance with such regulation is expensive and consumes substantial financial and management resources. If the licensee, or any future marketing collaborator or contract manufacturer, fails to comply with applicable regulatory requirements, it may be subject to sanctions including fines, product recalls or seizures, injunctions, total or partial suspension of production, civil penalties, withdrawal of regulatory approvals and criminal prosecution. Any of these sanctions could delay or prevent the realization by COTI of milestone and royalty payments.

#### **5.3.6 Healthcare System Reforms**

In Canada and in many other countries, pricing and hence profitability of some or all prescription pharmaceuticals and biopharmaceuticals are subject to government control. This emphasis on managed healthcare, such as the November 2009 US Government healthcare bill, is expected to continue and will put pressure on the pricing of pharmaceutical products. Election of new or different political or government officials in large market countries could lead to dramatic changes in pricing, regulatory approval legislation and reimbursement that could have material impact on product approvals and commercialization of COTI's licensed products. Continuing efforts to contain or reduce the costs of healthcare may limit the commercial opportunity for COTI's compounds and reduce any associated milestone and royalty revenues and profits through a licensee.



## 6.0 DIVIDENDS

COTI has not, since the date of its incorporation, declared or paid any dividends on its common shares and does not currently have a policy with respect to the payment of dividends. For the immediate future, COTI does not envision any earnings arising from which dividends could be paid. COTI anticipates that it will initially retain future earnings and other cash resources for the operation and development of its business that would preclude the payment of dividends. The payment of dividends in the future will depend on revenues, net income, positive cash flow, COTI's financial condition and such other factors as the Directors of COTI consider appropriate.

## 7.0 DESCRIPTION OF CAPITAL STRUCTURE

### 7.1 Authorized and Outstanding Capital

The Company's authorized share capital consists of an unlimited number of common shares and an unlimited number of preference shares, issuable in series, of which 74,453,214 common shares were issued and outstanding as of April 30, 2012. There were no preference shares issued and outstanding as of April 30, 2012. There was no change in either share class from April 30, 2012, to the date of this AIF. The following is a summary of the material provisions attached to the common shares and preference shares.

#### Common Shares

The holders of the common shares are entitled to receive notice of all meetings of the shareholders of the Company; attend all such meetings; and shall have one vote for each common share held at all such meetings, except for meetings at which only holders of another specified class or series of shares are entitled to vote separately as a class or series. Subject to the prior rights of the holders of the preference shares or any other shares ranking senior to the common shares, the holders of the common shares are entitled to:

- (a) receive any dividends as and when declared by the Board of Directors, out of the assets of the Company properly applicable to the payment of dividends, in such amount and in such form as the Board of Directors may from time to time determine; and
- (b) receive the remaining property of the Company in the event of any liquidation, dissolution or winding-up of the Company.

#### Preference Shares

The Board may issue preference shares at any time and from time to time in one or more series, each series of which shall have the designations, rights, privileges, restrictions and conditions fixed by the Board. The preference shares of each series shall rank on a parity with the preference shares of every other series. They shall be entitled to priority over the common shares and any other shares of the Company ranking junior to the preference shares with respect to priority in the payment of dividends and the return of capital and the distribution of assets of the Company in the event of the liquidation, dissolution or winding-up of the Company.

## 7.2 Options to Purchase Common Shares

Table 6 shows the number of stock options to purchase common shares of COTI issued and outstanding as at April 30, 2012. Other than the common shares to be issued upon the exercise of the outstanding options, 3,868,993 common shares remain available for future issuance under the Company's Stock Option Plan (SOP) at April 30, 2012.

Table 6: Outstanding Stock Options at April 30, 2012

Date of Grant	Quantity	Exercise Price	Expiry Date
Mar 31/11	56,818	\$0.15	Mar 30/16
Oct 28/10	1,065,892	\$0.165	Oct 27/15
Oct 18/11 <sup>(1)</sup>	71,449	\$0.25	Oct 17/16
Sep 27/11	756,098	\$0.30	Sep 26/16
Jun 21/11	200,000	\$0.35	Jun 20/16
Feb 12/10 <sup>(1)</sup>	223,404	\$0.47	Feb 11/15
Sep 10/09	481,483	\$0.50	Sep 9/14
Jun 10/08	226,628	\$0.75	Jun 9/13
Feb 17/09	294,556	\$0.90	Feb 16/14
Jul 16/08 <sup>(1)</sup>	100,000	\$1.20	Jul 15/13
Oct 9/07	100,000	\$2.00	Oct 8/12
<b>Total</b>	<b>3,576,328</b>		

Notes:

<sup>(1)</sup> An employee resigned March 22, 2012. Under the terms of the SOP, the employee has 90 days from the date of resignation to exercise their vested stock options. These consisted of 100,000 options from the grant of Jul 16/08, 40,426 options from the grant of Feb 12, 2010 and 9,955 from the grant of Oct 18, 2011.

## 7.3 Warrants to Purchase Common Shares

Private placements were completed in April and May 2010, March and April 2011, and March and April 2012, resulting in the Company issuing common share purchase warrants and compensation warrants to acquire common shares of the Company. The summary details regarding these warrants are set out in Table 7.

Table 7: Outstanding Warrants at April 30, 2012

Warrant Type	Date of Issue	Quantity	Exercise Price	Expiry Date
Common share purchase				
	Apr/10 <sup>(1)</sup>	129,020	\$0.55	Jan 31/13
	Apr-May/10 <sup>(1)</sup>	1,446,480	\$0.37	Jan 31/13
	Mar 25/11	8,152,500	\$0.30	Sep 24/12
	Apr 7/11	2,187,500	\$0.30	Oct 6/12
	Apr 21/11	2,160,000	\$0.30	Oct 20/12
	Mar 23/12	3,125,000	\$0.30	Sep 23/13
	Apr 10/12	6,250,000	\$0.30	Oct 9/13
	Apr 27/12	1,875,000	\$0.30	Oct 26/13
Subtotal		25,325,500		
Compensation				
	Mar 25/11	385,500	\$0.30	Sep 24/12
	Apr 7/11	82,000	\$0.30	Oct 6/12
	Apr 21/11	40,000	\$0.30	Oct 20/12
	Mar 23/12	157,937	\$0.30	Sep 23/13
	Apr 10/12	437,499	\$0.30	Oct 9/13
	Apr 27/12	131,250	\$0.30	Oct 26/13
Subtotal		1,234,186		
<b>Grand total</b>		<b>26,559,686</b>		

**Note:**

<sup>(1)</sup> As noted under Capital Financing, the Company issued one-half warrants with its private placement of “Units” in April and May 2010. These warrants were amended in October 2011.

**7.4 Principal Holders of Voting Securities of the Company**

To the knowledge of the Directors and executive officers of the Company no persons or companies beneficially own, directly or indirectly, or exercise control or direction over, voting securities of the Company carrying more than 10 percent of the voting rights attached to any class of voting securities of the Company as of April 30, 2012 or the date of this AIF.

**8.0 MARKET FOR SECURITIES**

**8.1 Trading Shares and Prices**

The Company’s common shares are listed and posted for trading on the TSXV under the trading symbol COT. Table 8 sets out the market price ranges in CAD per common share and aggregate trading volumes on a monthly basis as reported by the TSXV during the most recently completed financial year.

Table 8: Common Share Trading Prices in Fiscal 2012

Month	High	Low	Volume
May 2011	\$0.440	\$0.280	877,191
June 2011	0.380	0.270	306,707
July 2011	0.390	0.255	798,800
August 2011	0.380	0.250	1,888,271
September 2011	0.360	0.230	476,258
October 2011	0.285	0.200	532,245
November 2011	0.280	0.190	70,790
December 2011	0.240	0.170	179,632
January 2012	0.200	0.160	777,040
February 2012	0.180	0.150	207,112
March 2012	0.250	0.115	208,580
April 2012	\$0.250	\$0.190	318,100

**9.0 DIRECTORS AND OFFICERS**

**9.1 Name, Occupation and Security Holdings**

The following information related to each Director and officer of COTI is set out below; name, province and country of residence, positions held by them with COTI, their principal occupation during the preceding five years, the period of service as a Director, the number and percentage of securities of each class of voting securities controlled or directed, directly or indirectly, Board Committee membership and participation. The information as to shares beneficially owned, directly or indirectly, or over which control or direction was exercised as set forth in the table has been furnished by the respective individual. Each term of a director is for the period from the last Annual General Meeting until the next Annual General Meeting unless noted otherwise. The information presented below is as of the date of this AIF.

<p><u>John C. Drake</u> LLB</p> <p>London, Ontario, Canada</p> <p>President of Drake Goodwin Corp.</p> <p>Director Since: February 20, 2007</p> <p>Independent Director</p>	<p>Mr. Drake is the President (since April 1985) and Founding Partner of Drake Goodwin Corporation, a London, Ontario private investment firm with diverse interests. Mr. Drake is also a partner in Cassandra Capital L.P., a private venture capital firm specializing in early stage technology investments. He is currently Vice Chairman of Children’s Choice Learning Centers, a private company and a leading provider of corporate childcare in the United States. From 2002-2008 Mr. Drake was Chairman of DGM Bank and Trust Inc., a privately owned offshore bank located in Barbados. He is also co-owner of Redtail Golf Course, an exclusive private golf course located outside of Port Stanley, Ontario. Mr. Drake has provided extensive support to community events and was appointed an Honorary Colonel of the 1st Hussars of the Royal Canadian Armoured Corps in 1999. Mr. Drake obtained his BA and LLB degrees from the University of Western Ontario and was a member of the Law Society of Upper Canada from 1973-2012.</p>			
	<p><b>Other Public Company Directorships in the Past Five Years</b></p> <ul style="list-style-type: none"> <li>• 2009 to present, iLOOKABOUT Corp., a TSXV listed company.</li> <li>• 2006 to 2008, Discovery Air Inc., a TSX listed company.</li> </ul>			
	<p><b>Board/Committee Membership</b></p>		<p><b>Attendance</b></p>	
	Board (Chair)		7 of 7	100%
	Combined Total		7 of 7	100%
	<p><b>Equity Ownership <sup>(1)</sup></b></p>			
	Common Shares	Stock Options	Warrants	% Ownership
	6,166,134	631,144	3,352,678	8.28%

<p><u>Dr. Wayne R. Danter</u> MD, FRCPC</p> <p>London, Ontario, Canada</p> <p>President, Chief Executive Officer, and Chief Scientific Officer</p> <p>Director Since: October 13, 2006</p>	<p>Dr. Danter is one of the founders of COTI and the inventor of the Company’s platform drug discovery process, CHEMSAS®. He trained at the University of Western Ontario (UWO) in Internal Medicine and Clinical Pharmacology and is responsible for the discovery and profiling of the Company’s small molecule portfolios, collaboration projects with pharmaceutical partners, and continued development of COTI’s proprietary technology CHEMSAS®. Dr. Danter also plays a significant role in developing the business applications of COTI’s proprietary technology. Prior to full time employment with COTI in 2005, Dr. Danter was an Associate Professor of Medicine at UWO.</p>			
	<p><b>Other Public Company Directorships in the Past Five Years</b></p> <p>None</p>			
	<p><b>Board/Committee Membership</b></p>		<p><b>Attendance</b></p>	
	Board		7 of 7	100%
	Audit		6 of 6	100%
	Combined Total		13 of 13	100%
	<p><b>Equity Ownership <sup>(1)</sup></b></p>			
	Common Shares	Stock Options	Warrants	% Ownership
	6,311,562	370,246	121,428	8.47%

<p><u>Douglas S. Alexander</u> CA</p> <p>London, Ontario, Canada</p> <p>Professional Corporate Director</p> <p>Director Since: September 18, 2008</p> <p>Independent Director</p>	<p>Prior to his current role as a Professional Corporate Director, Mr. Alexander served as Chief Financial Officer of various Canadian public companies for 15 years, the most recent being from 1999 to 2004 as Executive Vice President and Chief Financial Officer of Trojan Technologies Inc., an international environmental technology company. Mr. Alexander is a Chartered Accountant and a Chartered Director, having graduated in 2009 from the Director’s College, a joint venture between McMaster University and the Conference Board of Canada.</p>			
	<p><b>Other Public Company Directorships in the Past Five Years</b></p>			
	<ul style="list-style-type: none"> <li>• 2010 to June 2012, Biorem Inc., a TSXV-listed company.</li> <li>• 2005 to present, Hydrogenics Corporation, a NASDAQ and TSX listed company – Chairman of the Board since March 2009.</li> <li>• 2005 to 2008, Saxon Financial Inc., a TSX listed investment management firm acquired by MacKenzie Financial Corporation, a subsidiary of IGM Financial Inc. in September 2008.</li> </ul>			
	<p><b>Board/Committee Membership</b></p>		<p><b>Attendance</b></p>	
	Board		7 of 7	100%
	Audit (Chair)		6 of 6	100%
	Compensation		1 of 1	100%
Combined Total		14 of 14	100%	
<p><b>Equity Ownership</b><sup>(1)</sup></p>				
Common Shares	Stock Options	Warrants	% Ownership	
92,500	391,861	77,500	0.12%	

<p><u>Dr. Kathleen A. Ferguson</u> MD, FRCPC</p> <p>London, Ontario, Canada</p> <p>Director Since: October 13, 2006</p> <p>Independent Director</p>	<p>Dr. Ferguson is one of the founders of COTI. She is a graduate of the University of Western Ontario (UWO) Medical School and trained in Respiriology at UWO. She completed her Clinical Research Fellowship at the University of British Columbia in 1994. She joined Western’s Medical Faculty in 1994. She was an Associate Professor of Medicine at the Schulich School of Medicine UWO from 2000 until her retirement in June 2012. She was active in clinical practice, clinical research and teaching. Her main clinical research efforts were in the field of sleep disordered breathing. Her extensive background in scientific research and her years of clinical experience are an important resource for COTI and the Board.</p>			
	<p><b>Other Public Company Directorships in the Past Five Years</b></p>			
	<p>None</p>			
	<p><b>Board/Committee Membership</b></p>		<p><b>Attendance</b></p>	
	Board		7 of 7	100%
	Compensation		1 of 1	100%
	Combined Total		8 of 8	100%
<p><b>Equity Ownership</b><sup>(1)</sup></p>				
Common Shares	Stock Options	Warrants	% Ownership	
4,116,472	434,097	170,500	5.53%	

<p><u>Bruno Maruzzo</u> MAsc, MBA</p> <p>Toronto, Ontario, Canada</p> <p>President of TechnoVenture Inc.</p> <p>Director Since: October 13, 2006</p> <p>Independent Director</p>	<p>Mr. Maruzzo has worked with a variety of public and private technology companies in the computer and life science sectors, where he held positions in a range of areas including business development, corporate development, investor relations, engineering and general management. He also worked in the venture capital field sourcing, assessing, and making investments in early-stage, technology-based companies in Canada and the US. He holds Masters Degrees in Biomedical Engineering and Business Administration from the University of Toronto.</p>			
	<p><b>Other Public Company Directorships in the past five years</b></p>			
	<ul style="list-style-type: none"> <li>• 2003 to present, Pinetree Capital, a TSX-listed company.</li> <li>• 2007 to present, Hamilton Thorne Limited (formerly Calotto Capital), a TSXV-listed company.</li> <li>• 2008 to present, Strike Graphite Corp (formerly Minati Capital), a TSXV-listed company.</li> <li>• 2008 to present, Sintana Energy (formerly Drift Lake Resources), a TSXV-listed company.</li> <li>• 2008 to October 2010, Cleanfield Alternative Energy, a TSXV-listed company.</li> <li>• March 2010 to present, Diagnos Inc., a TSXV-listed company.</li> </ul>			
	<p><b>Board/Committee Membership</b></p>		<p><b>Attendance</b></p>	
	Board		7 of 7	100%
	Audit		6 of 6	100%
	Compensation (Chair)		1 of 1	100%
	Combined Total		14 of 14	100%
	<p><b>Equity Ownership <sup>(1)</sup></b></p>			
	Common Shares	Stock Options	Warrants	% Ownership
97,500	443,642	67,500	0.13%	

<p><u>Dr. Brent Norton</u> MD, MBA, ICDD</p> <p><u>Business consultant</u></p> <p>Toronto, Ontario, Canada</p> <p>Director Since: March 31, 2011</p>	<p>Dr. Norton is an accomplished leader in the Life Science industry with significant experience as a Founder, President, CEO and Director of several successful Life Science companies. Having completed his medical training at McGill University, Dr. Norton subsequently obtained a Masters of Business Administration at the University of Western Ontario's Richard Ivey School of Business and is a certified director from the Institute of Corporate Directors. Dr. Norton is an advisor to the Richard Ivey School of Business Healthcare MBA sector and the Ivey Center for Health Innovation and Leadership, and President of the Osler Bluff Ski Club.</p>			
	<p><b>Other Public Company Directorships in the Past Five Years</b></p>			
	<ul style="list-style-type: none"> <li>• 1994 to present, PLC Medical Systems, an OTC BB-listed company.</li> <li>• April 2009 to present, PreMD Inc.<sup>(2)</sup></li> <li>• 2002 to May 2011, Novadaq Technologies Inc., a TSX-listed company.</li> </ul>			
	<p><b>Board/Committee Membership</b></p>		<p><b>Attendance</b></p>	
	Board		7 of 7	100%
	Combined Total		7 of 7	100%
	<p><b>Equity Ownership <sup>(1)</sup></b></p>			
	Common Shares	Stock Options	Warrants	% Ownership
	1,125,000	342,184	1,125,000	1.51%

<p><u>Murray Wallace</u> FCA</p> <p>London, Ontario, Canada</p> <p>CEO of Granite Global Solutions</p> <p>Director Since: April 23, 2007</p> <p>Independent Director</p>	<p>Mr. Wallace is the CEO of Granite Global Solutions, a risk management company and Chairman of Park Street Capital Corporation, an investment and consulting company. He is a Fellow of the Institute of Chartered Accountants of Ontario (FCA). He began his business career in Regina in 1972 and held various positions with the Government of Saskatchewan, including that of Deputy Minister of Finance and Deputy Minister to the Premier. Over his 35-year career, Mr. Wallace has held several senior executive roles with prominent organizations including Saskatchewan Government Insurance, National Trust, Royal Trust, Wellington Insurance, Avco Financial Services Canada, and Axia NetMedia. From 2004 until May 1, 2010, Mr. Wallace was also a director of Western Surety Co., a private company with diverse business interests headquartered in Regina, Saskatchewan.</p>		
<b>Other Public Company Directorships in the Past Five Years</b>			
<ul style="list-style-type: none"> <li>• 2004 to May 2012, Terravest Income Fund, a TSX listed unincorporated open-ended investment trust.</li> <li>• 2007 to present, Canada Pension Plan Investment Board, a federal crown corporation.</li> <li>• 2004 to 2007 Ipsco Inc., a TSX listed company.</li> </ul>			
<b>Board/Committee Membership</b>			
Board	7 of 7	100%	
Audit	6 of 6	100%	
Combined Total	13 of 13	100%	
<b>Equity Ownership <sup>(1)</sup></b>			
Common Shares	Stock Options	Warrants	% Ownership
172,500	513,686	67,500	0.23%

<p><u>Thomas Wellner</u> BSc. Hons.</p> <p>Toronto, Ontario, Canada</p> <p>President &amp; Chief Executive Officer, CML Healthcare Inc.</p> <p>Director Since: July 11, 2012</p> <p>Independent Director</p>	<p>Mr. Wellner is the President and CEO of CML Healthcare Inc. (TSX: CLC), an Ontario based publicly-traded provider of laboratory testing and medical imaging services. He is the founder of Wellner Capital Advisors, Ltd., a private investment and advisory services company. From 2008 - 2011, Mr. Wellner was President and CEO of Therapure Biopharm Inc., a private biopharmaceutical development and contract manufacturing company based in Mississauga, Ontario. Mr. Wellner brings a broad range of leadership experience gained from 20 years with Eli Lilly &amp; Co. in senior roles in Canada, China, the US, Latin America and the United Kingdom (UK) that included being General Manager of Lilly Deutschland GmbH from 2004-2007. Mr. Wellner currently serves on the board of directors for Atlantic Healthcare Plc., a private specialty pharmaceutical holding company based in the UK and Freshbooks, a private software billing service company located in Toronto. In November 2011, he was elected to the Board of Governors at Rothesay Netherwood School, a private Atlantic Canada boarding school. He has also served on the editorial committee for <i>Pharmaceutical Marketing Europe</i> and has led business cases at INSEAD and Harvard business schools. Mr. Wellner holds a BSc. Honours in Life Sciences from Queen's University, Canada.</p>		
<b>Other Public Company Directorships in the Past Five Years</b>			
2008 to present, DiaMedica, a TSXV listed company.			
<b>Board/Committee Membership</b>			
Board <sup>(3)</sup>	N/A	N/A	
<b>Equity Ownership <sup>(1)</sup></b>			
Common Shares	Stock Options	Warrant	% Ownership
-	17,838	-	-



<p><u>Gene Kelly</u></p> <p>London, Ontario, Canada</p> <p>Chief Financial Officer</p> <p>Director Since: n/a</p>	<p>Mr. Kelly has thirty years of business experience in accounting, finance, and operations following graduation with an Hon. Bus. Admin. degree from the University of Windsor in 1980. For the 17 years prior to joining COTI full-time on January 1, 2007, his career developed through various positions of increasing responsibility at the Cuddy Group of Companies, a large, private, entrepreneurial, multi-national agrifood business. Positions held in the ten years prior to joining COTI included: September 1995 Director of Financial Planning &amp; Analysis - Cuddy Farms and Controller - Cuddy Farms Canada; February 1998 VP Strategic Implementations - Cuddy Farms; April 1999 VP Commodities &amp; Industry Affairs - Cuddy Food Products; March 2001 Director of Finance - Cuddy Farms; November 2003 Director of Quality Assurance &amp; Process Improvement - Cuddy Farms.</p>			
	<p><b>Other Public Company Directorships in the Past Five Years</b></p>			
	<p>None</p>			
	<p><b>Board/Committee Membership</b></p>		<p><b>Attendance</b></p>	
	<p>Board</p>		<p>7 of 7</p>	<p>100%</p>
	<p>Audit</p>		<p>6 of 6</p>	<p>100%</p>
	<p>Combined Total</p>		<p>13 of 13</p>	<p>100%</p>
<p><b>Equity Ownership <sup>(1)</sup></b></p>				
<p>Common Shares</p>	<p>Stock Options</p>	<p>Warrants</p>	<p>% Ownership</p>	
<p>1,594,267</p>	<p>60,701</p>	<p>69,464</p>	<p>2.14%</p>	

Notes:

- (1) Number of common shares, stock options and warrants beneficially owned, directly or indirectly, or controlled or directed.
- (2) PreMD Inc. was delisted from the TSX in April 2009. See Section 9.2 below for additional information.
- (3) Mr. Wellner was appointed to the Board on July 11, 2012, and accordingly was not eligible to attend any Board meetings during fiscal 2012.

The Governance and Nominating Committee did not meet formally during fiscal 2012 with the mandate of this Committee fulfilled during the year through discussions of the full Board.

As of the date of this AIF, the Directors and officers of COTI as a group, beneficially owned, directly or indirectly, or exercised control or direction over 19,675,935 common shares of the Company, which represented 26.4% of the outstanding shares of the Company.

**9.2 Corporate Cease Trade Orders, Bankruptcies, Penalties or Sanctions**

To the best of the Company’s knowledge, no Director, executive officer or shareholder holding a sufficient number of securities of the Company to materially affect the control of the Company is, or within the 10 years prior to the date hereof has been, a director or executive officer of any company that, while that person was acting in that capacity (i) was the subject of a cease trade order or similar order or an order that denied the company access to any exemption under securities legislation for a period of more than 30 consecutive days, (ii) was subject to an event that resulted, after the director or executive officer ceased to hold such position, in the other company being the subject of a cease trade or similar order or an order that denied the company access to any exemption under securities legislation for a period of more than 30 consecutive days, or (iii) within a year of that person ceasing to act in that capacity, was declared bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise

with creditors or had a receiver, receiver manager or trustee appointed to hold its assets, other than Mr. Maruzzo as described below.

To the best of the Company's knowledge, no Director or executive officer of the Company, or any shareholder holding sufficient securities of the Company to affect control materially of the Company has:

- (a) within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold that person's assets;
- (b) been subject to any penalties or sanctions imposed by a court relating to Canadian securities legislation or by a Canadian securities regulatory authority or has entered into a settlement agreement with a Canadian securities regulatory authority; or,
- (c) been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor making an investment decision.

Mr. Maruzzo was a director of CCPC Biotech Inc. (TSX: CBO), which was subject to a cease trade order issued by the Alberta Securities Commission on July 19, 2002 for failure to file required financial information and a similar order issued by the British Columbia Securities Commission on September 4, 2002. Trading of the company's shares remained suspended until the company was delisted on November 19, 2003. The management information circular of CCPC Biotech Inc., dated February 27, 2004, refers to the company's financial difficulties resulting in part from unauthorized advances from the company to its CEO, who later declared personal bankruptcy. The company was voluntarily dissolved on December 16, 2004.

Mr. Maruzzo was also a director of Materials Protection Technologies Inc. (TSX: YTP; now quoted under the symbol MTXLF on NASDAQ OTC), which was subject to a cease trade order issued by the Ontario Securities Commission on May 22, 2002 for failure to file required financial information due to the company's financial difficulties, and similar orders issued by each of the British Columbia Securities Commission on May 29, 2002 and the Alberta Securities Commission on June 21, 2002. Trading of the company's shares remained suspended until the company was delisted on June 20, 2003.

Mr. Maruzzo was also a director of World Wise Technologies Inc. (CDNX: YWW) and along with other insiders of the company, subject to individual cease trade orders issued by the Ontario Securities Commission on February 21, 2003 as a result of the company's failure to make statutory filings due to lack of funds. The company was delisted in June 2003 from the CDNX.

Dr. Norton is currently the President and CEO of PreMD Inc. (PREMF: OTC US) and, in connection with the voluntary delisting of PreMD Inc.'s shares from the Toronto Stock Exchange, cease trade orders were issued requiring all trading in and all acquisitions of securities of PreMD Inc. to cease due to PreMD Inc.'s failure to file continuous disclosure materials required by Ontario securities law. The cease trade orders are still in effect.

### **9.3 Conflicts of Interest**

The Company is not aware of any existing material conflicts of interest between the Company and any Director or officer of the Company, nor is it aware of any potential conflicts of interest other than as set out below.

Certain Directors and officers of the Company currently, or may in the future, act as directors or officers of other companies and, consequently, it is possible that a conflict will arise between their duties as a director or officer of COTI and their duties as a director or officer of such other company. There is no certainty that while performing their duties for the Company, that the directors or officers will not be in situations that could give rise to conflicts of interest, nor is there any certainty that any such conflict, if it arises, will be resolved in favour of COTI. However, the Directors are required by law to act honestly and in good faith with a view to the best interests of the Company and its shareholders and to disclose any personal interest that they may have in any material transaction that is proposed to be entered into with the Company and to abstain from voting as a Director for the approval of any such transaction.

### **10.0 PROMOTERS**

Within the two most recently completed financial years, or during the current financial year, no person or company had been a promoter of the Company.

### **11.0 LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

COTI was not a party to, or subject to, any legal proceedings during the year either directly or indirectly. The Company does not contemplate any legal proceedings on its part and is not aware if any other party contemplates any such proceedings.

The Company was not involved in any actions before a securities regulatory authority, a court or other regulatory body during the most recently completed financial year and has not incurred any penalties or sanctions nor been involved in any settlement agreements.

### **12.0 INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

The transactions in which directors or executive officers of COTI or any of their respective associates or affiliates, had any material interest, directly or indirectly, in any material transaction with COTI within the three years preceding the date of this AIF are set out below.

#### **12.1 Participation in 2011 Private Placement**

Mr. John Drake, the Company's Chairman, and Dr. Wayne Danter, the Company's President and CEO participated in the Company's private placement completed in March-April 2011. At the time of this transaction both Mr. Drake and Dr. Danter each held greater than 10% of the outstanding common shares of the Company. The details of their participation in the gross proceeds of the financing are summarized in Table 9.

Table 9: Participation in Private Placement

Director Name	% of Common Shares Outstanding Pre-Private Placement	Unit Subscription			% of Common Shares Outstanding Post Private Placement
		Common shares	Warrants	Gross Proceeds	
John C. Drake	11.10%	3,125,000	3,125,000	\$ 500,000	13.92%
Dr. Wayne R. Danter	14.60%	312,500	312,500	50,000	11.74%
Total	25.70%			\$ 550,000	25.66%
% of Private Placement				27.5%	

### 12.2 Contingent Consideration Acquisition of DDP Therapeutics

Effective November 27, 2007, the Company completed an acquisition from Whippoorwill Holdings Limited, 2080084 Ontario Inc. and Dr. Wayne Danter of all the outstanding common shares in the capital of 3015402 Ontario Inc. (formerly 6441513 Canada Inc.) operating as DDP Therapeutics (DDP) not already owned by the Company and the purchase of two 5% promissory notes owing by DDP to two of the Sellers. Ownership of DDP prior to completion of the Share Purchase consisted of: COTI 10%, Dr. Wayne Danter, President of COTI, 10%; Whippoorwill Holdings Limited, a wholly owned company of Mr. John Drake, then the CEO and currently Chairman of COTI, 40%; and 2080084 Ontario Inc., an unrelated party, 40%.

Upon the purchase of DDP, the Company became contingently liable for the issuance of 1,431,441 common shares as part of the purchase consideration should certain development milestones be subsequently achieved by any molecule from the small cell lung cancer library (Molecule) acquired under the purchase (Contingent Consideration). One-half of this Contingent Consideration is payable upon the first occasion any Molecule achieves one of the following milestones:

- a) when the Company is given notification of acceptance of an investigational new drug (IND) filing and an IND acceptance number is received; or
- b) when either the US or the European patent authorities issue the Company a final patent.

The second half of this Contingent Consideration is payable upon any Molecule achieving both milestones.

If by November 27, 2015, the eighth anniversary date of the transaction, these milestones are not achieved and the Contingent Consideration not paid, and if the Company has not abandoned its efforts to develop and commercialize the Molecules by this anniversary date, the Company is required to:

- a) issue the Contingent Consideration of 1,431,441 common shares at fair value, or
- b) pay cash consideration equal to the amount by which the fair value of the Molecules purchased in the transaction exceed the amount invested in the Molecules by the Company. If the fair value of the Molecules purchased in the transaction is less than the amount invested in the Molecules by the Company, no Contingent Consideration is payable.

During fiscal 2012, the Company received a US patent for a Molecule, COTI-2, that represented the achievement of one of the milestones. Accordingly, on October 12, 2011, the Company issued 715,720 common shares as payment for one-half of the contingent consideration. The common shares had a market value of \$164,616 based upon the closing market price of the Company's shares on October 11, 2011.

The Company has determined that for accounting purposes the achievement of the other milestone for COTI-2 does not meet the guidance for recognition provided in International Accounting Standard 37 – Provisions, which states that where an event is “more likely than not” to occur such event should be recognized. Major factors considered in the likelihood determination included: the uncertainty inherent in the remaining testing for COTI-2 prior to filing an IND application; the cost, time and expertise required in the IND application and approval process itself; and the Company’s current financial capacity to develop COTI-2 successfully through to achieving this milestone. The inability to meet the more likely than not criteria would apply to any of the other Molecules based upon the significant cost and timeline in advancing them through both milestones.

The value of the consideration given up at the time the additional consideration is paid will be added to the cost of the Molecules (intangible asset) with an increase in share capital if share consideration, or a reduction in cash if a cash payment. The value of the Contingent Consideration issuable upon the second milestone achievement or upon the eighth anniversary date of the transaction is not determinable at this time as it is based on fair values in effect at the time such consideration becomes payable.

### **12.3 Executive Management Consulting Agreement**

Effective June 1, 2011, the Company entered into an executive management consulting services agreement with one of its Directors, Dr. Brent Norton. Dr. Norton was paid a daily rate for invoiced time as services were provided. Also under the agreement, Dr. Norton was granted 200,000 stock options on June 21, 2011 with 50,000 options vesting on each of the following dates: September 1 and December 1, 2011, and March 1 and June 1, 2012. The options have a five-year life and an exercise price of \$0.35. Dr. Norton was also entitled to certain cash bonuses based upon his material contribution to the Company successfully achieving any or all of a license agreement, a collaboration agreement or a financing. Compensation paid under the agreement during the FYE 2012 included: \$169,667 for services and \$33,220 in bonuses.

The agreement expired subsequent to the fiscal year end on May 31, 2012 and a new agreement is currently in negotiation, with Dr. Norton continuing to provide services on terms consistent with the pre-existing agreement.

### **13.0 TRANSFER AGENT AND REGISTRAR**

COTI’s registrar and the transfer agent for its common shares in Canada is:

Computershare Investor Services Inc.  
Suite 600, 530 8th Avenue SW  
Calgary, Alberta T2P 3S8  
Tel: 403-267-6800  
Fax: 403-267-6593

### **14.0 MATERIAL CONTRACTS**

No material contracts have been entered into by COTI other than contracts entered into in the ordinary course of business.

## 15.0 THE AUDIT COMMITTEE AND AUDITORS

A summary of the membership, responsibilities and activities of the Audit Committee (Committee) is set out below. The Company has adopted a Charter for the Audit Committee, a copy of which is attached as Schedule “A”.

### 15.1 Composition of the Audit Committee

Table 10 sets out the members of the Audit Committee and their qualifications for this role.

Table 10: Audit Committee Membership and Qualifications

Director	Relationship	Financially Literate <sup>(1)</sup>
Douglas Alexander, CA - Chair	Independent <sup>(1)</sup>	Yes
Murray Wallace, FCA	Independent <sup>(1)</sup>	Yes
Bruno Maruzzo, MBA	Independent <sup>(1)</sup>	Yes

Note:

<sup>(1)</sup> As defined in NI 52-110.

### 15.2 Relevant Education and Experience

The members of the Committee are each experienced senior business executives. Mr. Alexander is a member of the Institute of Chartered Accountants of Ontario and Mr. Wallace is a Fellow of the Institute of Chartered Accountants of Ontario. Mr. Maruzzo does not have a formal accounting designation, however, he has many years of experience in evaluating financial statements that present a breadth and level of complexity of accounting issues generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Company’s financial statements. Based on their experience, each member has an understanding of the accounting principles used by the Company to prepare its financial statements, the ability to assess the general application of such accounting principles in connection with the accounting for estimates, accruals, and reserves by the Company and an understanding of internal controls and procedures for financial reporting. Each of the members of the Committee have been involved actively at a supervisory level in the financial and accounting management of companies and have demonstrated ability to address financial and accounting issues.

### 15.3 Audit Committee Oversight

At no time since the commencement of the Company’s most recently completed financial year was a recommendation of the Committee to nominate or compensate an external auditor not adopted by the Board.

### 15.4 Non-Reliance on Certain Exemptions

At no time since the commencement of the Company’s most recently completed financial year has the Company relied on the exemptions provided in National Instrument (NI) 52-110. These include: Section 2.4 De Minimis Non-audit Services, Section 3.2 Initial Public Offerings, Section 3.4 Events Outside Control of Member, Section 3.5 Death, Disability or Resignation of Audit Committee Member and an exemption from NI 52-110, in whole or in part, granted under Part 8 of NI 52-110.

**15.5 Pre-Approval Policies and Procedures**

The Committee has established an Auditors’ Engagement Services Policy setting out the services that the independent auditors are permitted to perform, which are pre-approved by the Committee in accordance with the Committee’s policy. Unless a type of service to be provided by the independent auditor has received general pre-approval, it must receive specific pre-approval prior to such service being provided to the Company by the independent auditors.

**15.6 Auditors**

The auditors for the Company are:

KPMG LLP  
 Chartered Accountants & Licensed Public Accountants  
 Suite 1400, 140 Fullarton Street  
 London, Ontario N6A 5P2

**15.7 External Auditor Service Fees**

The aggregate fees billed by the Company’s external auditors in each of the last two fiscal years are set out in Table 11.

Table 11: Two Year Auditor’s Fees Summary

<b>Financial Year Ending</b>	<b>Audit Fees</b>	<b>Audit Related Fees <sup>(1)</sup></b>	<b>Tax Fees <sup>(2)</sup></b>	<b>All Other Fees <sup>(3)</sup></b>	<b>Total Fees</b>
April 30, 2012	\$58,850	\$40,576	\$6,900	\$7,800	\$114,126
April 30, 2011	\$57,750	\$32,740	\$5,850	\$2,100	\$98,440

<sup>(1)</sup> The audit related fees in fiscal 2012 reflected consulting fees for the Company’s transition to International Financial Reporting Standards (IFRS). This included specific engagements to first, review the Company’s accounting policies on the application of IFRS to its financial reporting and second, performed specified procedures relating to the implementation of these policies in the Company’s first quarterly reporting under IFRS at July 31, 2011.

The audit related fees in fiscal 2011 primarily reflected \$31,200 in consulting fees for the Company’s transition planning to IFRS that all Canadian public entities were required to adopt for their fiscal years beginning after January 1, 2011.

<sup>(2)</sup> Tax fees in fiscal 2012 related to: an investigation and filing of tax schedules for refundable tax credits in the Province of Quebec; review of the third quarter tax provision documentation and disclosure; and discussions with the Company’s controller on the tax working papers and changes resulting from IFRS.

Tax fees in fiscal 2011 primarily related to a review of the quarterly tax provision documentation and disclosure for the third quarter, research on an arrangement to incorporate a Canadian Controlled Private Research and Development Corporation and sundry tax inquiries such as the transition to the harmonized sales tax system.

- (3) Other fees in fiscal 2012 primarily related to advice on contingent consideration and prohibited investment rule implications for COTI's major shareholders and the impact on the Company's financing.

#### **16.0 INTERESTS OF EXPERTS**

KPMG LLP, Chartered Accountants and Licensed Public Accountants, who provided the auditors' report accompanying the Company's annual financial statements in respect of fiscal 2012, have confirmed to the Company that KPMG LLP is independent in accordance with the Rules of Professional Conduct as outlined by the Institute of Chartered Accountants of Ontario.

#### **17.0 ADDITIONAL INFORMATION**

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans, is contained in the Company's information circular for its most recent annual meeting of shareholders that involved the election of directors. Additional financial information is provided in the Company's financial statements and management's discussion and analysis for the most recently completed financial year.

Copies of the above and other disclosure documents, and additional information relating to the Company, may be found, examined and/or obtained through the internet by accessing the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).



## Schedule "A"

### **AUDIT COMMITTEE CHARTER** **Amended July 24, 2012**

#### **1. PURPOSE**

The Audit Committee is a committee of the Board of Directors of Critical Outcome Technologies Inc. (the "Corporation") established to assist the Board of Directors in fulfilling its oversight responsibilities for the accounting and financial reporting processes of the Corporation and audits of the Corporation's financial statements by carrying out the activities described in this Charter in the manner detailed by this Charter.

#### **2. COMMITTEE MEMBERSHIP**

- (a) The Board of Directors, immediately upon their election by the shareholders of the Corporation, shall appoint an Audit Committee to serve for the forthcoming year. Each member of the Audit Committee shall serve at the pleasure of the Board of Directors until the member resigns, is removed or ceases to be a director of the Corporation.
- (b) The Audit Committee shall consist of not less than three directors, none of whom shall be officers or employees of the Corporation or any of its affiliates.
- (c) The Board of Directors shall designate a member of the Audit Committee to serve as Chairman.
- (d) Each member of the Audit Committee shall:
  - (i) be a member of the Board of Directors of the Corporation;
  - (ii) be independent according to the definition of independence applicable to members of audit committees under National Instrument 52-110 ("NI 52-110") entitled "Audit Committees" of the Canadian Securities Administrators, unless otherwise approved by the Board of Directors in accordance with NI 52-110; and
  - (iii) have the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Corporation's financial statements, unless the financial statements are otherwise approved by the Board of Directors in accordance with NI 52-110.
- (e) The Chief Financial Officer of the Corporation shall act as secretary of the Audit Committee.

#### **3. MEETINGS**

- (a) Meetings of the Audit Committee shall be held at least four times a year. The meetings will be scheduled to permit timely review of the Corporation's interim and annual financial statements.

- (b) Additional meetings of the Audit Committee may be called by the Chairman, any member of the Committee or the external auditors of the Corporation.
- (c) Not less than 72 hours' notice of meetings of the Audit Committee shall be given by the Chief Financial Officer together with any meeting materials, unless waived by all members of the Audit Committee.
- (d) Meetings of the Audit Committee may be held by means of conference telephone.
- (e) A resolution signed by all members of the Audit Committee shall be as effective as if passed at a meeting of the Audit Committee that was duly called and held.

#### **4. REPORTING**

- (a) The Chief Financial Officer will arrange for the preparation of minutes of the meetings of the Audit Committee in sufficient detail to convey the substance of all discussions held.
- (b) The Chairman may report orally to the Board on any matter in his/her view requiring the immediate attention of the Board.

#### **5. RESPONSIBILITIES**

In fulfilling its responsibilities, the Audit Committee shall:

- (a) review the Corporation's annual and interim financial statements and Management Discussion and Analysis prior to public disclosure of such information by the Corporation;
- (b) review the annual and interim earnings press releases, and any other press releases containing financial information related to earnings, prior to public disclosure of such information by the Corporation;
- (c) satisfy itself, on behalf of the Board of Directors, that adequate procedures are in place for the review of the Corporation's public disclosure of financial information extracted or derived from the Corporation's financial statements (other than the public disclosure referred to in (a) above) and periodically assess the adequacy of such procedures;
- (d) satisfy itself, on behalf of the Board of Directors, that the Corporation's annual financial statements are fairly presented in accordance with International Financial Reporting Standards (IFRS), and recommend to the Board whether the annual financial statements should be approved;
- (e) satisfy itself, on behalf of the Board of Directors, that the Corporation's interim financial statements are fairly presented in accordance with IFRS and, approve such interim financial statements on behalf of the Board of Directors as appropriate;
- (f) satisfy itself, on behalf of the Board of Directors, that the information contained in the Corporation's Annual Report to Shareholders and other financial publications such as Management's Discussion and Analysis, the Annual Information Form, if applicable, and the information contained therein is fairly presented in all material respects;

- (g) satisfy itself, on behalf of the Board of Directors, that the Corporation has implemented appropriate systems to identify, assess and mitigate significant business risks;
- (h) satisfy itself, on behalf of the Board of Directors, that the Corporation has implemented appropriate systems of internal control over financial reporting (which may include an internal audit function) and that these are operating effectively;
- (i) satisfy itself, on behalf of the Board of Directors, that the Corporation has implemented appropriate systems of internal control to ensure compliance with legal, regulatory and ethical requirements;
- (j) establish procedures, for the receipt, retention and treatment of complaints received by the Corporation, if any, regarding accounting, internal accounting controls or auditing matters;
- (k) establish procedures for the confidential, anonymous submission by employees of the Corporation of concerns, if any, regarding questionable accounting or auditing matters;
- (l) satisfy itself, on behalf of the Board of Directors, that the external audit function has been effectively carried out and that any matter which the independent auditors wish to bring to the attention of the Board has been addressed; and
- (m) at least once per year, meet with the external auditors and management in separate sessions to discuss any matters that these groups believe should be discussed with the Audit Committee or that the Audit Committee believes should be discussed with these groups.

**6. RELATIONSHIP WITH AUDITORS**

- (a) The Audit Committee shall recommend to the Board of Directors the external auditor to be nominated for appointment at the Corporation's annual meeting for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Corporation.
- (b) The Audit Committee shall satisfy itself, on behalf of the Board of Directors, that the external auditor is "independent" in accordance with applicable laws and regulatory requirements.
- (c) The Audit Committee shall recommend to the Board of Directors the compensation of the external auditor.
- (d) The external auditor is required to report directly to the Audit Committee and the Audit Committee has the authority to communicate directly with the external auditor.
- (e) The Audit Committee shall be directly responsible for overseeing the work of the external auditor engaged for the purpose of preparing or issuing an auditors' report or performing other audit, review or attest services for the Corporation, including the resolution of disagreements between management and the external auditor regarding financial reporting.

- (f) The Audit Committee shall review and approve the Corporation's hiring policies regarding current and former partners and employees of the current and former external auditor of the Corporation.

**7. PRE-APPROVAL OF NON-AUDIT SERVICES**

- (a) The Audit Committee shall pre-approve all services to be provided to the Corporation or its subsidiaries by the external auditor at a cost to the Corporation, individually or in aggregate, of \$25,000 or more, other than the professional services rendered by the external auditor for the audit and review of the Corporation's financial statements or services that are normally provided by the external auditor in connection with statutory and regulatory filings or engagements.
- (b) In addition to the Pre-approval threshold amount noted in (a), the pre-approval requirement is also satisfied where:
  - (i) the Audit Committee delegates authority to pre-approve non-audit services to one or more members, which pre-approval must be presented by the member(s) to the full Audit Committee at its next scheduled meeting; or
  - (ii) the Audit Committee adopts specific policies and procedures for the engagement of non-audit services provided that: (i) the pre-approval policies and procedures are detailed as to the particular service, (ii) the Audit Committee is informed of each non-audit service, and (iii) the procedures do not include delegation of the Audit Committee's responsibilities to management.

**8. AUTHORITY TO ENGAGE EXTERNAL ADVISORS**

The Audit Committee has the authority to engage independent counsel and other advisors as it determines necessary to carry out its duties and to set and have the Corporation pay the compensation for such advisors.