

Business Review and Update

Sixth Annual and Special Meeting of Shareholders

September 25, 2012

Forward-Looking Statements

When used anywhere in this presentation, the words expects, believes, anticipates, estimates, and similar expressions are intended to identify forward-looking statements. Forward-looking statements herein may include statements addressing future financial and operating results for Critical Outcome Technologies Inc. (COTI).

COTI has based these forward-looking statements on its current expectations about future events. Such statements are subject to risks and uncertainties including, but not limited to, the successful implementation of COTI's strategic plans, the acceptance of new products, the obsolescence of existing products, the resolution of existing and potential future patent issues, additional competition, changes in economic conditions, and other risks described in documents COTI has filed with the Toronto Stock Exchange and Ontario Securities Commission.

All forward-looking statements in this document are qualified entirely by the cautionary statements included in this document and such filings. These risks and uncertainties could cause actual results to differ materially from results expressed or implied by forward-looking statements contained in this document. These forward-looking statements speak only as of the date of this document.



Current Business Overview

- Drug discovery, preclinical drug development and intellectual property engine
- Discovery engine uses "Artificial Intelligence" software and proprietary algorithms to create a novel, proprietary process
- Core <u>platform technology</u> CHEMSAS® Computerized Hybrid Expert Molecular Structure Activity Screening
- Efficiently accelerates drug discovery and provides <u>optimized</u> lead compounds = major risk reduction resulting in a higher probability of clinical and commercial success



Market Need – Transacting with Pharma/Biotech and Others – Why?

- Reduces time, cost and investment risk
- Technology model minimizes Regulatory risk
- Creates valuable Intellectual Property
- Adds Marketing Life at patent protected price
- Strategic asset to large Pharma/Biotech
- Decision tool for scientists and investors



Strategic Direction

Value creation - revenue and third party validation

- License COTI-2 with upfront payment, milestones and royalties
- Co-development deals with Pharma
- IP Engine

Using momentum

- Other drug development projects AML
- Other potential revenue streams:
 - Web portal access to CHEMSAS® engine
 - CHEMFirm due diligence tool for investors
 - Cancer cell application personalized medicine tool

Strategic asset

For Pharma/Biotech/Tech companies



Pharmaceutical Industry Challenges



Industry Challenges

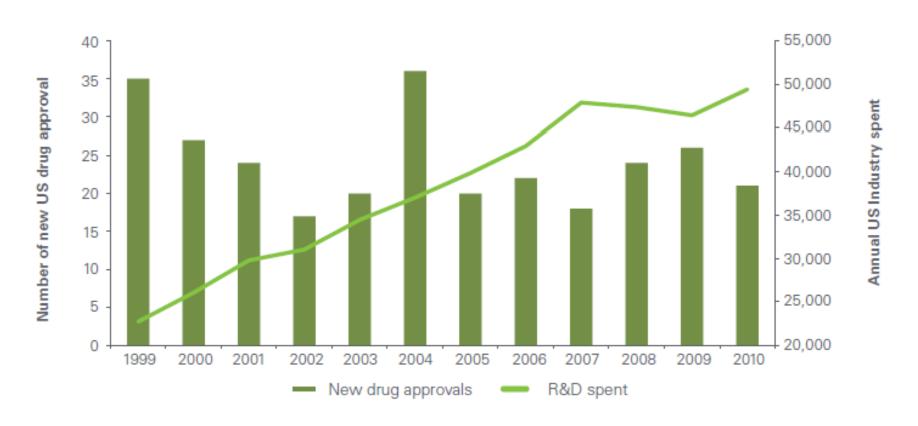
Major Pharmas continuing to face:

- Low productivity from R&D pipelines reflected in decreasing FDA approvals
- Loss of patent protection for a large number of blockbuster drugs (patent cliff) during 2012-2018 period
- New drug approvals not making up the lost revenue/profits from drugs coming off patent
- Generic competition sales volume and margin squeeze
- Uncertainty surrounding health care reform continues



R&D Productivity Creates Opportunity

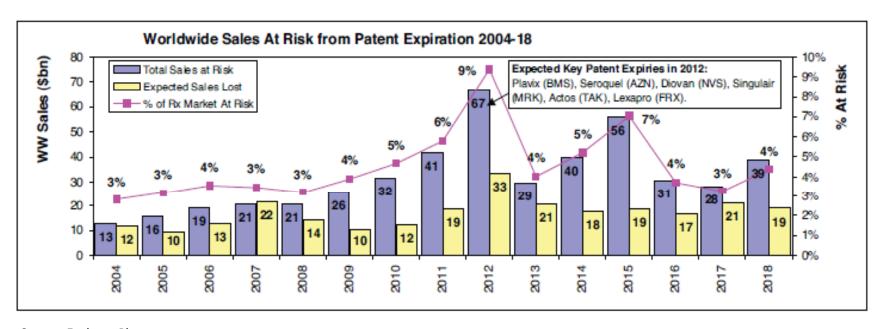
New Medical Entity Approvals and Annual R&D Spending 1999-2010



Source: PhRMA and FDA



Pharmaceutical Pipeline Patent Cliff



Source: Evaluate Pharma

Sales "at risk" represents worldwide product sales based upon actual sales to the end of 2011 and forecasted to expiry with "at risk" in expiry year based upon forecasted sales in year prior to expiry. Eg. Plavix sales in 2011 = \$7.1B, shown as "at risk" in 2012.



Personalized Medicine Transforming the Pharmaceutical Industry

- Industry's historic business model for developing blockbusters is broken — one drug does not suit all
- Backbone of its research and development (R&D) strategy for many years — forced to change
- Growing opportunity to provide appropriate and effective treatment to patients based on their genetic profile
 - The R&D paradigm is evolving and the personalized approach is gaining traction.



2011-12 Improving Market Conditions

- Major Pharma focusing on strengths in late stage clinical trials, manufacturing, marketing and distribution
- Addressing fundamental R&D productivity through internal program reduction, core focus and in-licensing as late a stage as possible
- Increasing need to look earlier in R&D process to find high potential assets
- 2011-12 has seen a decrease in overall deals but pre-clinical deal values holding



Average Upfront Licensing / JV Payments



Insight into Action: www.recap.com



COTI-2: Our Most Advanced Oncology Compound



COTI-2: Scientific Merit

- Novel mechanism(s) of action
 - Class effects of thiosemicarbazones:
 - Metal chelation binding, Reactive Oxygen/Nitrogen Species (ROS/RNS)
 - May restore a more normal p53 protein structure and function for some p53 mutations perhaps based on zinc chelation
 - Non-Class effects:
 - Modulates the amount and activation of AKT/AKT2 protein thereby inhibiting its cancer promoting activities
 - Appears to be very active against cancer stem cells



COTI-2: Scientific Merit (cont'd)

- Potential biomarker(s)
 - Through a simple test (tumour biopsy) indicating the presence of a p53 mutation and/or increased AKT/AKT2 expression – prescribe COTI-2
- Single and combination therapy effectiveness in multiple human xenografts
- Multiple cancer indications based on p53 mutation and/or AKT/AKT2 status
- Easily synthesized with no stability issues
- Low toxicity
- Oral formulation



COTI-2: Robust Patent Protection

- Two US Patents granted October 2011 and March 2012;
 First IP ever granted by USPTO for an AI developed compound
- Composition of matter
 - Route to synthesis/MOA/combination therapy
- Additional patents filed as new IP develops



COTI-2: 2012 Milestones

Activity	Status
In vivo study on the pharmacodynamics of COTI-2 in Ovcar-3 animal model	Completed in Sept 2011
Select the optimal oral formulation and start preformulation CMC work	Formulation selected Aug 2012 Initial CMC work completed
Evaluate COTI-2 effectiveness in 2 cancer stem cell assays	Completed Jul 2012
Develop COTI-2 detection method for Phase 1	Completed Aug 2012
Confirm COTI-2 effect on AKT pathway	Completed Aug 2012
Identify p53 gene mutations as important potential targets	Completed Aug 2012
Begin the two species acute toxicity package using the optimal oral formulation	Started in Sept 2012



COTI-2: Future Milestones

Activity	Status
Complete the two species acute toxicity package using the optimal oral formulation	In progress with completion early 2013
Complete p53 MOA studies	In progress – complete Nov 2012
Complete cancer stem cell MOA studies	In progress – complete Oct 2012
Complete a confirmation of oral formulation in xenograft model	Commence October 2012
Complete CMC work	Commence October 2012
Draft IND submission	Commence October 2012
IND submission to FDA	First quarter 2013
Phase 1 Clinical trial	Could commence following IND approval in 2013



COTI-2 MOA Class Effects: WIP

- Does COTI-2 bind to zinc and copper ions?
 - Experiments in progress
- Does COTI-2 generates reactive oxygen (ROS) and nitrogen species (RNS)?
 - Analysis of COTI-2 in multiple cancer cell line results pending
- Does COTI-2 affect mutant p53 protein and restore normal function
 - o Experiments of Yu et al, 2012 being replicated



COTI-2 Licensing



Licensing: Market Attributes

Attribute	Licensing Impact
Novel small molecule	Potential first-in-class and best-in- class mechanism(s) of action
Preclinical data supports important class effects including effectiveness in the presence of p53 gene mutations	Very important area of current cancer research
Preclinical data supports important non-class effects including modulation/inhibition of AKT/AKT2 and strong activity in cancer stem cells	Part of a multiple targeting MOA with p53
Phase 1B: all solid tumors – enriched with tumors with p53 mutations and AKT/AKT2 over expression	Clear clinical path using a standard approach
Potential biomarkers include p53 gene status and/or AKT/AKT2 expression from tumour biopsy	Potential to identify appropriate patient population: major FDA interest
Robust intellectual property	Patent life - multiple patents filed through 2030 providing long life



Proximity to Licensing

- Keep moving COTI-2 forward in development
 - every risk reduction step enhances asset value and licensing potential
- License potential exists throughout development continuum as positive test results are socialized with interested parties
- Established relationships with 13 of top 15 licensee companies of oncology biotech programs
- Established relationships with many of the emerging drug development companies (Phase 1 and 2)



Other Products, Collaborations and Co-developments



Acute Myelogenous Leukemia - Update

- Multiple patents issued for North America and Europe
- Synthesized candidates completed in January 2012
- *In vitro* testing:
 - Efficacy (IC₅₀) testing in 6 leukemia cell lines completed
 - Kinase target confirmation kinase screens completed
 - ADME/Tox screen completed
- Assessing results and deciding on compounds to proceed to MTD and xenograft studies
- IRAP contribution for COTI's F'13 = \$100,000 CAD



R&D Collaborations

- Second phase of commercialization strategy
- Objective build the relationship and revenue opportunities
- Using CHEMSAS ® to find leads
- Typically high risk/high reward research and discovery project
- Terms of each collaboration unique but common elements:
 - Upfront payment, milestones, royalty
- Announced two collaborations in September 2012:
 - Western University
 - Delmar Chemicals
- Continuing to foster these including major Pharma collaborations



Summary

- COTI-2 is a highly marketable asset both scientifically and commercially
- Asset value continues to increase and licensing activity ramping up
- CHEMSAS® is a novel robust technology intellectual property generator
- Multiple revenue opportunities from CHEMSAS®
- Commercial collaboration opportunities gaining momentum





Thank you for your continued support!