

## PROMISING ADVANCE FOR MANY COMMON CANCERS

### *COTI-2 demonstrates activity against many common p53 gene mutations*

**London, Ontario (June 11, 2013): Critical Outcome Technologies Inc. (TSX Venture: COT) (“COTI” or the “Corporation”)** announces positive results from experiments carried out with its lead cancer drug candidate, COTI-2, in the cancer research laboratories of Gordon Mills, M.D., Ph.D. Chair of the Department of Systems Biology and the Co-director of the Khalifa Institute for Personalized Cancer Therapy at The University of Texas MD Anderson Cancer Center in Houston, Texas. These preclinical experiments were designed to definitively determine the effect of COTI-2 in 32 common p53 mutations. The p53 gene is a tumor suppressing gene. However, if the p53 gene is mutated, cancers often develop and grow out of control.

“These results are encouraging given the central importance of p53 gene mutations in many cancers,” stated Dr. Mills. “Our research and data confirm that COTI-2 is most active in mutant p53 tumors and the effect of COTI-2 in many specific p53 mutations is striking. In addition, it appears that this effect can be augmented by the presence of mutations in the AKT signaling pathway. The preclinical data with COTI-2 in cell lines, animal models and the potential mechanism of action warrant clinical trials. These clinical trials should evaluate both response and the utility of biomarkers to select patients. If COTI-2 proves to be highly active in people with p53 mutant tumors, this would represent a breakthrough therapy for many cancer patients.”

“New therapies that target mutations of genes such as p53 represent a promising approach compared to conventional organ-specific cancer treatments,” said Dr. Wayne Danter, COTI’s CEO. “These important results confirm and extend our understanding of the mechanism of action (“MOA”) of COTI-2. While previous internal research indicated that COTI-2’s effectiveness was related to the p53 mutation status of the tumor, the quality and amount of scientific data provided by Dr. Mills are definitive and answer the remaining MOA questions posed by potential licensing partners who are waiting for these results.”

Extensive data from the experiments have demonstrated that:

- (1) COTI-2 has a major mechanism of action that is dependent on p53 gene mutation status in human cancer cells. This is of significant therapeutic importance because at least 50% of all human cancers have at least one type of p53 mutation.
- (2) COTI-2 restores p53 protein to its normal function in human cancer cells with a wide range of common p53 gene mutations. This range includes three of the most common mutations found in about 20% of all human cancers.
- (3) COTI-2 is also effective in the presence of common mutations in the PI3K/AKT/mTOR cell signaling pathway. This means that COTI-2 is effective in cancers with mutations that lead to over expression of the tumor promoting protein AKT.
- (4) COTI-2 is generally less effective in human cancer cells with no mutant p53 protein; however, it is highly active in some cells where the p53 gene is not mutated such as occurs in some cancers where the p53 gene has been lost.

- (5) The selection of patients for initial clinical trials could be based on the p53 gene mutation status of the patients' tumor. This would ensure that COTI-2 is administered to patients who are most likely to benefit the most.
- (6) A companion diagnostic test using the cell signaling proteins that respond to normal p53 protein could be developed to evaluate COTI-2 therapy in tumors with specific p53 mutations.

**Other COTI-2 highlights:**

- Compound discovered using the Company's proprietary artificial intelligence-based drug discovery technology platform, CHEMSAS®
- Easily synthesized oral formulation with no stability issues
- Effective alone or in combination with approved cancer drugs
- Have four issued US patents with composition of matter protection to 2030

**About p53 gene mutations:**

Mutations of the p53 gene are the most common genetic alterations in human cancers, occurring in:

- More than 50% of all human cancers;
- Approximately 96% of ovarian cancers;
- Approximately 50% of non-small cell lung cancers;
- Between 40-50% of colorectal cancers;
- A wide range of other cancers, including breast, liver, bladder, pancreatic, esophagus and bone cancers.

**About Critical Outcome Technologies Inc. (COTI)**

COTI is a leading-edge technology company specializing in accelerating the discovery and development of small molecules – dramatically reducing the time and cost to bring new drugs to market. COTI'S proprietary artificial intelligence system, CHEMSAS®, utilizes a series of predictive computer models to identify compounds with a high probability of being successfully developed from disease specific drug discovery through chemical optimization and preclinical testing. These compounds are targeted for a variety of diseases, particularly those for which current treatments are either lacking or ineffective.

For more information, visit [www.criticaloutcome.com](http://www.criticaloutcome.com) or contact:

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