

## Frost & Sullivan Recognizes MTI's Revolutionary PolypDx™, a Screening Test for Early Indication of Colorectal Cancer

*MTI uses the large amounts of information extracted from its sample studies to develop easy and effective algorithms for its screening tests*

MOUNTAIN VIEW, Calif. — November 12, 2014 — Based on its recent analysis of the metabolomics-based diagnostic tests market, Frost & Sullivan recognizes Metabolomic Technologies Inc. (MTI) with the 2014 North American Frost & Sullivan Award for Technology Innovation Leadership. MTI's keen focus on improving the standard of healthcare, especially for patients at risk of colorectal cancer, has resulted in a metabolomic screening test, PolypDx™. PolypDx™ uses a proprietary technology platform and algorithms to detect benign adenomatous polyps, which are the precursor to colorectal cancer.

Current non-invasive screening methods for colorectal cancer are undesirable, as they are stool-based tests, have low patient compliance, and are not designed to detect polyps. The alternative is a colonoscopy, which is expensive and invasive. In this scenario, PolypDx™ has emerged as a game-changer as it is a urine test that can be easily and inexpensively deployed in healthcare institutions, clinics, and hospitals.

PolypDx™ measures a set of metabolite biomarkers to detect colonic polyps before they turn malignant. The advantage of this screening test over fecal occult blood testing (FOBT) or fecal immunochemical testing (FIT) is that it reduces the patients' chances of developing colorectal cancer by enabling the removal adenomatous colorectal polyps.

"MTI has employed its proprietary statistical algorithms and machine-learning capabilities to identify the metabolite assay signature, which offers greater sensitivity and specificity than FOBT tests," said Frost & Sullivan Research Analyst Madhumitha Rangesa. "PolypDx™ can be integrated into the diagnostic process for colon cancer and lowers the overall costs incurred by a patient, who would otherwise have to undergo a colonoscopy just to assess polyp presence."

MTI's commitment to establishing itself as a leading metabolomics-based screening test provider is evident in its efforts to accelerate innovation and creativity. Apart from equipping its research teams with research laboratories, it has also developed metabolomics-based signatures cost-effectively. MTI's signature assay does not comprise a large number of metabolites; yet, it nicely maintains test integrity and accuracy.

MTI aims to aid screening and diagnosis across multiple indications such as breast cancer, prostate cancer, celiac disease, ulcerative colitis, Crohn's disease, lactose intolerance, and other gastrointestinal disorders. The company's access to exhaustive infrastructure and cutting-edge technology has enabled it to commit to developing technology and products that will excel. It has also applied for numerous patents across the biomarkers space for metabolites that it has identified, as well as for its processing method and instrumentation for the development of these diagnostic tests.

MTI's use of nuclear magnetic resonance (NMR) spectral data to identify the metabolites that change during the development of a polyp has been a successful strategy. However, although the NMR-based tests are commercializable, their high cost and low availability limit the production capacity of large-scale, population-based screening programs. MTI addressed this issue by identifying a higher throughput platform and employing mass spectrometry (MS) to detect and identify the concentration of the metabolites that it discovered through NMR.

"In its constant efforts to improve its development processes, MTI is working toward unifying the NMR and MS processes to eliminate the multiple quality assurance and quality check steps,"

observed Madhumitha. "In the future, this will reduce the effort and time required to develop tests."

Each year, Frost & Sullivan presents this award to the company that has demonstrated uniqueness in developing and leveraging new technologies, which significantly impacts both the functionality and the customer value of the new products and applications. The award lauds the high R&D spend toward innovation, its relevance to the industry and the positive impact on brand perception.

Frost & Sullivan's Best Practices Awards recognize companies in a variety of regional and global markets for outstanding achievement in areas such as leadership, technological innovation, customer service, and product development. Industry analysts compare market participants and measure performance through in-depth interviews, analysis, and extensive secondary research.

### **About Metabolomic Technologies Inc. (MTI)**

Metabolomic Technologies Inc. (MTI) is a spin-off company from the University of Alberta. The company was formed from a research program facilitated by Drs. Haili Wang and Richard Fedorak, who were interested in using the new science of metabolomics to explore how colorectal cancer and adenomatous (precancerous) polyps affected cellular metabolism. At MTI, we are committed to developing advanced metabolomic-based diagnostic tests for the management of chronic diseases or 'high value' diagnostics.

Our initial focus is on developing highly novel, patented, metabolomic-based, diagnostic tests to detect adenomatous polyps and colorectal cancer (CRC). CRC is a leading cause of death in North America, but is curable if identified through early screening processes. However, current fecal-based screening methodologies are suboptimal due to a lack of sensitivity and acceptability. Our flagship product, PolypDx™, a spot urine diagnostic test, innovatively offers a significantly higher sensitivity in detecting adenomatous polyps and thus significantly advances the prevention of CRC.

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