

## New technology discovery at Mount Sinai Hospital holds promise for improved breast cancer treatment

(Toronto, ON, January 29, 2009) - In a study published by Nature Biotechnology online on February 1, 2009, Mount Sinai Hospital researchers have unveiled a new technology tool that analyzes breast cancer tumours to determine a patient's best treatment options. The tool can predict with more than 80 per cent accuracy a patient's chance of recovering from breast cancer.

"Breast cancer is the most common cancer in Canadian women," said Dr. Jeff Wrana, Senior Investigator and the Mary Janigan Research Chair in Molecular Cancer Therapeutics at the Samuel Lunenfeld Research Institute of Mount Sinai Hospital, and an International Scholar of the Howard Hughes Medical Institute. "Our hope with this technology is to eventually provide individualized analysis to breast cancer patients and their oncologists so that they are better informed and empowered to select a treatment best suited to them."

The technology, called 'DyNeMo' analyzes networks of proteins in cancer cells. Analysis of more than 350 patients found that those who survive breast cancer have a different organization of the network of proteins within the tumour cells, compared with patients who succumbed to the illness. DyNeMo can be used to predict the outcome in a newly diagnosed breast cancer patient and then assist clinicians and patients in making informed decisions on treatment. The study was led by the Mount Sinai Hospital team and co-authored by researchers at the University of Toronto and London, England's The Institute for Cancer Research.

In the future, this tool may be used to analyze other types of cancer and could be used to predict an individual's response to particular drugs.

"This research brings us one step closer to delivering individualized medicine in which healthcare professionals will be able to provide more accurate and personalized diagnoses and treatments," said Dr. Jim Woodgett, Director of Research for the Samuel Lunenfeld Research Institute of Mount Sinai Hospital.

The research was funded by Genome Canada with funds from Ontario Genomics Institute, and the Canadian Breast Cancer Foundation (CBCF) - Ontario Region. The CBCF's Interim CEO Beth Easton said the Foundation, "is pleased to play a role, along with others, in supporting the basic science behind this exciting development for breast cancer patients."

To bring this technology to patients, Mount Sinai Hospital is working to partner with the biotechnology industry, and estimates that the tool will be available to healthcare providers within the next five years.

### **About the Samuel Lunenfeld Research Institute of Mount Sinai Hospital**

The Samuel Lunenfeld Research Institute of Mount Sinai Hospital, a University of Toronto affiliated research centre established in 1985, is one of the world's premier centres in biomedical research. Thirty-four principal investigators lead research in diabetes, cancer biology, epidemiology, stem cell research, women's and infants' health, neurobiology and systems biology. For more information on the Samuel Lunenfeld Research Institute, please visit [www.lunenfeld.ca](http://www.lunenfeld.ca)

### **The Institute of Cancer Research**

The Institute of Cancer Research is Europe's leading cancer research centre with expert scientists working on cutting edge research. In 2009, The Institute of Cancer Research marks its 100 years of world leading research into cancer prevention, diagnosis and treatment. The Institute is a charity that relies on voluntary income. It is one of the world's most cost-effective major cancer research organisations with over 95p in every £ directly supporting research. For more information visit [www.icr.ac.uk](http://www.icr.ac.uk).

### **Genome Canada**

Genome Canada is a private, non-profit corporation, and the primary funding and information resource relating to genomics and proteomics research in Canada. Its principal goal is to position Canada among the world leaders in genomics and proteomics research. Its mandate is to develop and implement a national strategy in genomics and proteomics research for the benefit of all Canadians in key selected areas such as agriculture, environment, fisheries, forestry, animal and human health, and new technology. For this purpose, it has received \$840 million in funding from the Canadian government and co-funding from other partners over eight years, allowing it to invest a total of \$1.6 billion in 131 innovative research projects and technology platforms. To learn more about Genome Canada, please visit the website at [www.genomecanada.ca](http://www.genomecanada.ca).

### **Canadian Breast Cancer Foundation - Ontario Region**

The Canadian Breast Cancer Foundation was founded in 1986 as the first organization in the country devoted exclusively to the funding of breast cancer research, education and awareness initiatives. The Foundation continues to blaze new trails by directing donor dollars to world-class researchers and clinicians who are contributing to groundbreaking progress in breast cancer prevention, diagnosis, treatment and care. Since 2000, the Foundation has directed more than \$50 million to the cause in Ontario alone. For more information visit [www.cbcf.org/ontario](http://www.cbcf.org/ontario).

### **Media Contact:**

Nikki Luscombe  
Communications Specialist  
Samuel Lunenfeld Research Institute  
Mount Sinai Hospital  
Tel: 416 586-4800 x 2046  
Email: [luscombe@lunenfeld.ca](mailto:luscombe@lunenfeld.ca)