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DEPARTMENT OF PHARMACOLOGY AND
DEPARTMENT OF CANCER BIOLOGY

JEFF WRANA, PH.D.
INTERSECTION OF POLARITY AND
MORPHOGEN PATHWAYS IN DEVELOPMENT AND CANCER

MAY 3, 2012
4:00 P.M.
208 LIGHT HALL
Dr. Wrana's research program involves the application of high-throughput, robotics-based technologies that perform thousands of tests at a time and enable studies of gene function on a genome-wide scale. With his special expertise and phenomenal success securing support from granting agencies, he has established a Robotics Facility at the Lunenfeld Institute. The expertise and advanced technology available in the facility extends the research capacity of scientists throughout the Lunenfeld and beyond.

In February 2009, Dr. Wrana unveiled a new technology tool that analyzes breast cancer tumours to determine a patient's best treatment options. The technology, called 'DyNeMo' analyzes networks of proteins in cancer cells, and can predict with more than 80 per cent accuracy a patient’s chance of recovering from breast cancer. Wrana and his team hope that the technology will 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.

Dr. Wrana has also made significant discoveries related to colorectal and other cancers. In particular, he is interested in metastasis – the spread of cancer from its initial site to other places throughout the body – which is responsible for 90 percent of cancer deaths. Insights into this little-understood process have the potential to make a significant impact on survival rates for breast and other cancers.