



## **New Discoveries for Cancer Risk: Researchers Worldwide Take Part in one of History's Largest Scientific Consortium**

**Montréal, October 9, 2013** – Hundreds of researchers from North America, Europe, Australia and Asia have joined together in a consortium to identify the genetic basis of the five most common forms of cancer – breast, prostate, lung, ovarian and colorectal. The group, called the OncoArray Consortium, developed a new customized genotyping tool – the OncoArray – manufactured by the U.S. genomics firm Illumina, Inc.

“The U.S. National Cancer Institute (NCI)-funded Genetic Associations and Mechanisms of Oncology (GAME-ON) initiative has been instrumental in bringing together multiple consortia and provides primary funding for the OncoArray Consortium. It allowed us to design a custom array that incorporates some 530,000 markers, which is planned for genotyping on over 425,000 samples from patients with one of the five types of cancer and control subjects from around the world. The sheer size of the sample is unprecedented for a study on the genetic factors involved in cancer. The OncoArray Consortium’s work will provide insight into the inherited genetic basis of cancer and help scientists understand the underlying biology of cancer,” explained Professor Christopher Amos, Head of Dartmouth’s Center for Genomic Medicine, in the US, and the leader of the Lung Cancer consortium.

This project is a direct extension of the work that has been achieved in recent years through the Collaborative Oncological Gene-Environment Study (COGS). “The OncoArray will allow us to enhance our current understanding of the genetic factors associated with the risk of multiple cancers,” explained Cancer Research UK funded Professor Douglas Easton of University of Cambridge (United Kingdom). “We are proud to be involved in this international initiative, which will significantly accelerate the pace of discovery and lead to a greater understanding of a disease that affects one in three people,” he continued.

About 200 studies are involved in this project and nearly 50 countries participate in the consortium.

Breast cancer samples will represent more than one-third of the samples under analysis. “This is the largest number of samples ever used for research into the genetic basis of breast cancer risk,” noted Université Laval Professor Jacques Simard, who works at the Genomics Centre of the CHU de Québec Research Centre, and chair holder of the Canada Research Chair in Oncogenetics. Québec is at the forefront of this study, since the results will be used for a Québec-based project aiming to improve the early detection of breast cancer, an initiative funded by Génome Québec, Genome Canada, the CIHR and the Québec Breast Cancer Foundation. “The work of Professor Jacques Simard will broaden our current understanding of this terrible disease, leading to better risk stratification tools that will increase our ability to deliver better-targeted screening services to those women at higher risk,” said Marc LePage, President and CEO of Génome Québec.

Leading efforts in prostate cancer are Brian Henderson and Ros Eeles. “The OncoArray will provide fresh clues to the origin of these cancers and will hasten novel approaches to prevention and treatment,” Dr. Henderson said. “Every year 220,000 men in the US are diagnosed with prostate cancer, and there are 30,000 deaths. This indicates many people are being treated who don’t need it. We hope this product will help us focus on the men who have the highest risk to the more fatal forms of this disease.”

“This new research consortium will give us a fantastic opportunity to look at huge numbers of gene variants in prostate cancer patients across the world, helping expand our knowledge of the genetic basis of this disease,” said Ros Eeles, Professor of Oncogenetics at The Institute of Cancer Research, London, which along with the University of Cambridge.

Leading efforts in colorectal cancer is Kenneth T. Norris Jr. Chair in Cancer Prevention, Keck Medicine of USC, and Stephen Gruber, director, USC Norris Comprehensive Cancer Center, Keck Medicine of USC. Leading efforts in breast cancer on behalf of the US NCI are David J. Hunter, Dean for Academic Affairs, Harvard School of Public Health; for ovarian cancer the US NCI leader is Tom Sellers, Director of the Moffit Cancer Center in Florida. In addition, the Consortium of Investigators of Modifiers of BRCA1/2, led by Georgia Chenevix-Trench, will genotype the OncoArray on about 30,000 women and men who carry mutations in the *BRCA1* or *BRCA2* genes.

The project is funded through major grants from the U.S. National Cancer Institute to the GAME-ON initiative and the Division of Cancer Epidemiology and Genetics; Genome Canada/Génomique Québec/CIHR/Québec Breast Cancer Foundation through the Personalized Risk Stratification for Prevention and Early Detection of Breast Cancer; Cancer Research UK (Cambridge University and The Institute of Cancer Research); Movember and Prostate Cancer UK (The Institute of Cancer Research) and EU’s FP7 grant program (COGS), together with many other partners.

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- 30 -

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