



## **International Cancer Genome Consortium plans to sequence 25,000 cancer genomes**

Toronto, April 15, 2010 – The International Cancer Genome Consortium (ICGC) today set out its bold plan to decode the genomes from 25,000 cancer samples and create a resource of freely available data that will help cancer researchers around the world. The document outlines research design and projects as well as the important ethical framework for this science. The ICGC also announced that new members have joined the consortium. New projects in Italy and the European Union will contribute to efforts already underway in Australia, Canada, China, France, Germany, India, Japan, Spain, the United Kingdom, and the United States. Funded projects will examine more than 10,000 tumors for cancer types found around the globe that affect a diversity of organs including blood, brain, breast, colon, kidney, liver, lung, pancreas, stomach, oral cavity and ovary.

Published today in the journal *Nature* is a paper written by over 200 authors participating in ICGC projects. The paper describes how the projects will proceed, outlining the ethical framework, study design and policies. ICGC leaders will also present progress on their projects at the annual conference of the American Association for Cancer Research in Washington DC, April 17-21, 2010.

Studies of breast, liver, and pancreatic cancer have already generated datasets which are now available on the ICGC website at [www.icgc.org](http://www.icgc.org). The genomic analyses of the tumors were conducted by ICGC members in the U.K. (breast cancer), Japan (liver cancer), and Australia and Canada (pancreatic cancer). The data are housed in the Data Coordination Center which is hosted by the Ontario Institute for Cancer Research in Toronto.

Paul Nurse, cancer scientist and 2001 Nobel Laureate for Physiology or Medicine said, “The International Cancer Genome Consortium initiative will profoundly alter our understanding of the development of human cancer, across the spectrum of tumor types. The worldwide, coordinated nature of the project and the plans for data release will facilitate efficient deployment of resources and ensure that all cancer researchers can use the information generated in a timely manner.”

“The data released today can be used immediately by researchers who are working on better ways of preventing, detecting, diagnosing and treating cancer,” said Eric S. Lander, President and Director of the Broad Institute of Harvard and MIT and a member of ICGC. “The ability to identify the genetic changes in cancer is leading to new ways to devise therapies directed at the underlying cellular mechanisms of cancer and to target the right therapies to the right patients. We are moving into an era where the prescription for cancer treatment should be based on the genetics of each patient’s tumor.”

The International Cancer Genome Consortium is one of most ambitious biomedical research efforts since the Human Genome Project. The Consortium will help to coordinate current and future large-scale projects to understand the genomic changes involved in cancer. ICGC member organizations and participating centers have agreed upon common standards for informed consent and ethical oversight to ensure that all samples will be coded and stored

in ways that protect the identities of the participants in the study. To maximize the public benefit from ICGC member research, data will be made rapidly available to qualified investigators. In addition, all Consortium participants will agree not to file any patent applications or make other intellectual property claims on primary data from ICGC projects.

Worldwide, more than 7.5 million people died of cancer and more than 12 million new cases of cancer were diagnosed in 2007. Unless progress is made in understanding and controlling cancer, those numbers are expected to rise to 17.5 million deaths and 27 million new cases by 2050.

Once thought of as a single disease, cancer is now understood to be the result of genetic mutations in cells which disrupt normal functions leading to uncontrollable growth. Because mutations are often specific to a particular type or stage of cancer, systematically mapping the changes that occur in each cancer could provide the foundation for research to identify new therapies, diagnostics and preventive strategies.

For more information and updates about ICGC activities, please visit the website at: [www.icgc.org](http://www.icgc.org).

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## Backgrounder

### ICGC Cancer Genome Projects

<b>Lead Jurisdiction</b>	<b>Funding Organization</b>	<b>Tumor Type</b>
Australia	National Health and Medical Research Council	Pancreas Ovary
Canada	Ontario Institute for Cancer Research Ontario Ministry of Research and Innovation Canada Foundation for Innovation	Pancreas
China	Chinese Cancer Genome Consortium	Gastric
European Union	European Commission FP7	Breast Kidney
France	Institut National du Cancer	Breast Liver
Germany	Federal Ministry of Education and Research German Cancer Aid	Pediatric Brain
India	Department of Biotechnology Ministry of Science and Technology	Oral Cavity
Italy	University of Verona Italian Ministry of Education, University and Research	Rare Pancreatic
Japan	RIKEN National Institute of Biomedical Innovation	Liver
Spain	Spanish Ministry of Science and Innovation	Chronic Lymphocytic Leukemia
United Kingdom	The Wellcome Trust Breakthrough Breast Cancer	Breast

### The Cancer Genome Atlas Projects

United States	National Institutes of Health National Cancer Institute National Human Genome Research Institute	Brain Colon Leukemia Lung Ovarian
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