



GenomeCanada

BACKGROUND

Canada's Genomics Innovation Network

As of April 1, 2015, Genome Canada is providing core operating funds to 10 "Nodes" that together form Canada's new Genomics Innovation Network (GIN). The GIN is designed to allow innovation centres across Canada to collaborate and harness their collective power for the advancement of genomics research. Each Node provides researchers within Canada and internationally with access to leading-edge technologies used in genomics, metabolomics, proteomics and other related areas of research. They also will assist researchers in the development of research proposals by providing advice on appropriate technologies, study design, data analysis and bioinformatics that improve the quality of the research. Listed below are the 10 GIN Nodes.

The Proteomics Centre

Node leaders: Christoph Borchers, Leonard Foster

Lead Genome Centre: Genome British Columbia

The Proteomics Centre is a central hub for proteomics research in Canada, providing a "one-stop" shop for an expansive range of high-quality proteomics services.

Sequencing Platform at the BC Cancer Agency Genome Sciences Centre

Node leaders: Rob Holt, Marco Marra

Lead Genome Centre: Genome British Columbia

Since 2001, the sequencing platform at the Michael Smith Genome Sciences Centre at the BC Cancer Agency has been providing large-scale DNA sequencing data and supporting the rapid translation of research outcomes into healthcare and other applications.

The Metabolomics Innovation Centre

Node leaders: David Wishart, Christoph Borchers

Lead Genome Centre: Genome Alberta

The Metabolomics Innovation Centre is Canada's national metabolomics core facility and technology development centre, providing researchers with world-class resources for studying the thousands of small molecule metabolites that play key roles in biological pathways.

Toronto Centre for Phenogenomics

Node leader: Colin McKerlie

Lead Genome Centre: Ontario Genomics Institute

The Toronto Centre for Phenogenomics is the largest research facility in Canada designing, producing, and studying more than 250 mouse models each year with specific genetic mutations that allow researchers to learn more about the causes of disease and develop improved treatments.

Network Biology Collaborative Centre

Node leaders: Jeff Wrana, Anne-Claude Gingras

Lead Genome Centre: Ontario Genomics Institute

The Network Biology Collaborative Centre provides services to Canadian scientists with a focus on functional understanding of the role of genes and gene products in human health and the impact of their alteration on the initiation and progression of disease.

The Centre for Applied Genomics

Node leaders: Stephen Scherer, Lisa Strug

Lead Genome Centre: Ontario Genomics Institute

The Centre for Applied Genomics provides genome sequencing and analysis, and other genomics services, to the Canadian and international research communities. Its development of new algorithms and methods for the analysis of whole genome sequence data underpin major, international research collaborations.

Canadian Centre for Computational Genomics

Node leaders: Guillaume Bourque, Michael Brudno

Lead Genome Centre: Genome Québec

The Canadian Centre for Computational Genomics facilitates access to bioinformatics and computing resources for researchers in the life sciences, helping them realize the potential of genomic research.

McGill University and Génome Québec Innovation Centre

Node leaders: Mark Lathrop, Ioannis Ragoussis, Guillaume Bourque, Tomi Pastinen

Lead Genome Centre: Genome Québec

The Innovation Centre provides complete DNA and RNA analysis services, using the latest available sequencing and other technologies. The Centre also maintains full bioinformatics support for all its sequencing activities, using web-based user interface software.

Canadian Data Integration Centre

Node leaders: Philip Awadalla, Lincoln Stein, Isabel Fortier, Vincent Ferretti

Lead Genome Centre: Genome Québec

The Canadian Data Integration Centre offers bioinformatics services to researchers by providing the software and analytic systems for collecting, harmonizing, analyzing and

electronically publishing data to assist researchers in understanding the causes, prevention and treatment of human diseases.

Centre for Advanced Proteomics Analyses

Node leaders: Pierre Thibault, Michael Tyers

Lead Genome Centre: Genome Québec

The Centre for Advanced Proteomic Analyses (CAPA) is a multi-disciplinary facility that provides state-of-the-art proteomics technology services to researchers in support of areas such as the development of immunotherapies to fight cancer and the discovery of cellular regulatory mechanisms based on protein interactions and post-translational modifications.