A Science & Technology Platform brought to you by GenomeCanada

Genome Sciences Centre (GSC)

Status	Current
Category	S&T Platform
Genome Centre	Genome British Columbia
Platform Leaders	Marco Marra, Steven Jones & Robert Holt
Web Site	http://www.bcgsc.ca/lab/sequencing/

Platform Description

The Genomics platform provides the tools and expertise to analyze genomes in various ways and encompasses the areas of sequencing, mapping and bioinformatics. The platform is based at the BC Cancer Agency's Genome Sciences Centre (GSC) and supports large-scale genomics research across Canada and internationally, including Genome Canada projects in the diverse fields of health, environment and agriculture.

The GSC has developed the highest throughput clone fingerprinting currently available worldwide and has generated physical maps for many genomes. The Sequencing component of the platform can generate approximately 2.8 million quality DNA reads annually and is home to Genome Canada's participation in the International Bovine sequencing project. To analyze gene expression patterns during development in model organisms or in diseases like cancer, the GSC produces SAGE libraries. The GSC has also created high resolution human BAC arrays to analyze gene copy number variances. Bioinformatics provides the framework for the large-scale research projects through the development of information management systems and handling, storage and analysis of biological data.

The GSC has produced many important platform-related scientific achievements, including the sequencing of the SARS virus (2003) and consequently, GSC scientists are authors on some of the most heavily cited manuscripts in the biomedical field. The Genomics platform offers world class services that provide the science and leading edge technology enabling Canadian researchers to compete on the international stage.