A Science & Technology Platform brought to you by GenomeCanada

An Integrated and Distributed Bioinformatics Platform for Genome Canada

Status	Current
Category	S&T Platform
Genome Centre	Genome Alberta
Platform Leader	Christoph Sensen
Web Site	http://gcbioinformatics.ca

Platform Description

The development of bioinformatics tools (hardware and software) is necessary to facilitate our understanding of how genomes are organized and how cells, tissue and organisms function.

Building on existing infrastructure, mainly at the Calgary-based Sun Centre for Visual Genomics, the Bioinformatics Platform provides infrastructure and tools primarily for Genome Canada-funded projects, but access is also available to academic and industrial researchers in Canada.

The platform offers over 1,000 software tools, dozens of major databanks and computing power dedicated to bioinformatics, including Canada's only TimeLogic Decypher database search engines, major data storage facilities and a Bioinformatics GRID solution, which allows users transparent access to the multitude of tools.

A Help Desk provides access to custom programming functions, which can be used to create dedicated solutions for individual projects. This includes the adaptation of Laboratory Information Systems (LIMS) and the construction of tailor-made data pipelines for the analysis of large-scale data sets.

The Platform also features a training component. Two bioinformatics workshops are held each year to create power users who can utilize the platform efficiently. The courses are structured to enhance the knowledge and skills of wet-lab genome researchers who have a basic understanding of computational biology and programming skills.

After three years of research and service provision, the Bioinformatics Platform continues to provide services to Genome Canada through the Applied Genomics and Proteomic Research in Human Health Competition and Competition III projects, as well as other research initiatives around the world. The Platform will go forward in developing new approaches to the understanding of genomic data. This includes new data information and visualization techniques for BlueJay, the enhancement of BioMOBY web services and the expansion of the LIMS developed by the Help Desk.