



Helping doctors treat cancer patients...

Brain Tumour Analysis and Prediction

collaboration with the Cross Cancer Institute (Alberta Cancer Board)

- Learn to detect tumours on Magnetic Resonance images and to model tumour growth
This will help doctors identify cancerous cells which will enable more accurate radiotherapy treatments.

Breast and Ovarian Cancer Studies

collaboration with the Cross Cancer Institute (Alberta Cancer Board)

- Learn genetic markers (Single Nucleotide Polymorphisms “SNPs”, Microarray) that indicate which cancer treatment will be the most successful for a specific patient
- Learn to predict which patients will relapse.
This will help doctors prescribe treatments that are likely to succeed.

Prostate Cancer Toxicity Studies

collaboration with the Cross Cancer Institute (Alberta Cancer Board)

- Learn to predict which prostate cancer patients will exhibit toxicity due to radiation treatments
This will help doctors suggest appropriate treatments and improve patient care.

Helping Alberta farmers ensure healthy, good quality livestock...

Bovine SNP Data Analysis

collaboration with the Department of Agriculture & Forestry (University of Alberta)

- Learn to predict the effective breeding value of cattle using SNP data
This will help ranchers identify which cattle are best for breeding and which are best for consumption, ensuring livestock that is healthy and of good quality.

Helping scientists unlock the secrets of the human metabolome...

Human Metabolomic Data

collaboration with the Human Metabolome Project (Genome Alberta)

- Learn to identify and characterize all metabolites (small molecules found in the blood, urine and cerebrospinal fluid) in the human metabolome
This is used in a variety of health applications including pharmacology, pre-clinical drug trials, toxicology, transplant monitoring and newborn screening.

