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The Proteomics Centre (PC)

Status	Approved
Competition	Membership to the Genomics Innovation Network and Core Operations Support Funds
Genome Centre	Genome British Columbia
Project Leaders	Christoph Borchers/University of Victoria; Leonard Foster/University of British Columbia

Project Description

Proteomics is the study of proteins and their interactions. Genes express proteins; these proteins, in turn, do most of the work in cells. Studying what proteins are expressed and in what quantities is highly complex, but can provide sophisticated information about an organism's condition. A relatively new field (less than 20 years old), proteomics has evolved rapidly due, in large part, to improvements in mass spectrometry instrumentation and methods that have allowed researchers to probe the proteome with unprecedented depth, breadth and detail.

The Proteomics Centre is a central hub for proteomics research in Canada. It combines the cutting-edge research and strengths of the University of Victoria-Genome BC Proteomics Centre and the University of British Columbia Proteomics Core Facility to provide clients with a "one-stop shop" for an expansive range of high-quality proteomics services.

The Proteomics Centre offers custom analyses to fit clients' needs rather than fitting clients' needs into pre-existing moulds. It provides support at every step, from assisting with securing project funding to assisting with publishing research results and every step in between. Its services include: simultaneously quantifying large numbers of proteins for biomarker assessment; developing high-throughput clinical assays; discovering biomarkers; identifying proteins from biological samples; characterizing the structure and function of specific protein structures and assemblies; performing -omic-scale measurement of protein modifications; studying protease cleavage sites; mapping and characterizing protein-protein interactions; revealing the location of proteins and peptides in tissues; and developing and applying complementary bioinformatics tools for optimal experimental design and advanced data analysis. The cutting-edge services offered by the Proteomics Centre are an integral first step in addressing an area of

unmet medical and other needs.