# Current Faculty

Robert Bertolo

Professor | Biochemistry | Department Head

My research explores how early nutrition can permanently change metabolism, increasing the risk for diseases later in life. More specifically, we delve into the role of amino acids, creatine and vitamins in liver and intestinal metabolism and how early nutritional stresses can program metabolism. We use the surgically altered pig as a model for the human and trace nutrients through metabolic pathways using isotope kinetics.

T: 709-864-8529 | E: biochead@mun.ca | O: CSF 4239 |

<https://www.mun.ca/biochem/rbertolo/>

Mark D. Berry

Professor | Biochemistry | Department Head (on leave)

My research is in the health and disease relevance of a family of G protein-coupled receptors. This work combines cell culture, animal models, and various pharmacological and biochemical signalling assays.

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<https://www.mun.ca/biochem/mberry/>

Valerie Booth

Professor | Biochemistry

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Robert Brown

Associate Professor | Biochemistry

T: 709-864-8678 | E: rbrown@mun.ca | O: CSF 4240 |

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Janet Brunton

Professor | Biochemistry | Deputy Head (Undergraduate Studies)

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Sukhinder K. Cheema

University Research Professor | Biochemistry

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<https://www.mun.ca/biochem/scheema/>

Sherri Christian

Professor | Biochemistry | Deputy Head (Graduate Studies)

My research is on how cells communicate with their environment. Specifically, I focus on the role and regulation of extracellular vesicles (EVs), nanoparticles secreted by all cells, in normal B cell development and the use of EVs in monitoring leukemia. I am also interested in the interaction between breast cancer cells and fat cells.

T: 709-864-8550 | E: sherri.christian@mun.ca | O: CSF 3239 |

<https://www.mun.ca/biochem/sherri/>

Zahra Farahnak

Assistant Professor | Biochemistry

My lab investigates the combined effects of nutrition and exercise on optimizing body composition as an integrated approach to managing chronic health conditions such as general and central obesity. More specifically, the impacts of different nutrients such as omega-3 fatty acids and physical activity/exercise will be tested on body composition (lean mass, fat mass, bone mineral content and density) in both pre-clinical and clinical settings.

T: 709-864-3597 | E: zfarahnak@mun.ca | O: CSF 4242 |

<https://www.mun.ca/biochem/zahra-farahnak/>

Scott Harding

Associate Professor | Biochemistry

The resource burden cardiometabolic diseases place on healthcare systems is staggering. My research group aims to better understand how and why certain foods, dietary patterns, and lifestyle choices promote health while others promote disease. Our research focuses on physiological and metabolic aspects of dietary sugars and fats that change with changes in lifestyle factors (e.g. sleep and exercise). We are also studying the impact of public health policies that are aimed at reducing obesity and chronic disease burdens in the Newfoundland and Labrador population (e.g. sugar tax).

T: 709-864-8539 | E: sharding@mun.ca | O: CSF 3235 |

<https://scottharding.wordpress.com/> | <https://www.mun.ca/biochem/scott-harding/the-harding-lab/>

Pavan Kakumani

Assistant Professor | Biochemistry

My research program primarily focuses on elucidating small RNA-guided post-transcriptional gene regulatory mechanisms underlying human health and disease. It includes cellular, molecular, and biochemical approaches coupled with functional genomics, aimed at characterization of proteins involved in small RNA function and gene expression, with implications in cell fate determination and death.

T: 709-864-2501 | E: pkkakumani@mun.ca | O: CSF 4241 |

<https://www.kakumanilab.ca/>

Shyamchand Mayengbam

Assistant Professor | Biochemistry

T: 709-864-2761 | E: smayengbam@mun.ca | O: CSF 3234 |

[https://www.mayengbamlab.com](https://www.mayengbamlab.com/)

Martin Mulligan

Professor | Biochemistry

I am interested the mechanisms of gene regulation in bacteria especially cyanobacteria. I am not accepting applications from any graduate students as I will be retiring in the near future.

T: 709-864-7978 | E: mulligan@mun.ca | O: CSF 3233 |

<https://www.mun.ca/biochem/mulligan/>

Jaeok Park

Assistant Professor | Biochemistry

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<https://sites.google.com/view/jaeokparklab/> | <https://www.mun.ca/biochem/research-at-the-park-lab/>

Fereidoon Shahidi

University Research Professor | Biochemistry

My research interests are focused on food chemistry/biochemistry with emphasis on bioactives from plant, animal and other sources.  
Nutraceuticals, functional foods and dietary supplements constitute the core of this programme and these include phenolics and polyphenolics, natural antioxidants, omega-3 and other specialty oils, lipid oxidation, lipid biotechnology, protein hydrolysates and biopeptides, bioactives in health promotion and disease risk reduction, seafood (fish, shellfish, marine mammals), by-product utilization in zero-waste circular economy, aquaculture and process induced chemical changes in food.

T: 709-864-8552 | E: fshahidi@mun.ca | O: CSF 4243 |

<https://www.mun.ca/biochem/fshahidi/>

Amy Todd

Assistant Professor | Biochemistry

I study Life-Sciences Pedagogy in the context of Higher Education, with a focus on long-term retention and transfer, metacognition, inclusive and Universal Design for Learning (UDL), and the impact of student health and lifestyle on various aspects of learning. My work ranges from the Scholarship of Teaching and Learning (SoTL), with studies examining the impact of instructional strategies within courses, to broader, longitudinal studies that explore impacts on learning within and beyond academic programming.

T: 709-864-8549 | E: amy.todd@mun.ca | O: CSF 3227 |

<https://amytoddmun.wixsite.com/life-science-pedagog>

Katie Wilson

Assistant Professor | Biochemistry

My research uses multiscale computational modeling to obtain high-resolution dynamic structural and mechanistic information about biochemical processes. Specifically, I am interested in understanding the structure and function of glycosyltransferase enzymes and the effects of the resulting glycans on modulating biochemical processes related to human health and disease.

T: 709-864-6131 | E: k.wilson@mun.ca | O: CSF 3236 |

<https://sites.google.com/view/wilson-research-group>

Dr. Hélène Volkoff

Professor | Biology | Biochemistry

I do research in fish endocrinology with a focus on the regulation of food intake and reproduction. My work ranges from in vivo treatments and behavioural observations to molecular biology.

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# Staff

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Natalie Webber

Science Technician | Biochemistry

Currently on secondment