

BRIAN CECHEMANEK

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Biomedical Engineering and Research

Meticulous **Health Sciences Researcher** combining mechanical engineering experience with inquiry-based medical research education to investigate cellular biological systems on macro scales. Applies standard biological wet-lab techniques with leading bioinformatics tools to develop novel solutions in biomedical engineering settings. Organizes between multiple on-going assignments, projecting for both short-term and long-term deadlines.

Core competencies: - Cell Culture - Aseptic/Sterile Technique - Animal handling/surgery - MATLAB - Experimental Design - Data Processing/Analyses - Presentations - Fabrication

Professional Experience

Biologist -SFN Biosystems Inc - Calgary AB - 2012-2013

Designed and built the largest, to-date, enclosed PhotoBioReactor system for the mass sequestration of carbon emissions through the growth of algae with potential for high-value end-product creation.

Organized the setup of a biology lab and managed on-going laboratory duties including cell culture, strain-line maintenance, diagnostics, and analytical testing. Liaised between Engineering and Biological departments to ensure successful merging of concepts and practices.

Chief Operating Officer- Mechanical Engineering & Fabrication- Calgary AB - 2006-Present

Co-founder/Co-owner: Alta. Ltd. 1248812, a self-run mechanical engineering consultation, fabrication, inspection, and product design, company in natural gas physical separator and filtration packages.

Responsible for product design, materials sourcing, fabrication, sales, and financials. Particular experience in stainless and aluminum welding and fabrication, on-site inspections, drafting and P&IDs.

Research Experience

Graduate Student - Functional Magnetic Resonance Imaging - Calgary AB - 2014-Present

Investigation into brain differences in children and adolescents with Autism Spectrum Disorders using functional connectivity measures in the brain.

Employing the largest ever publicly available database of functional MRI images and computational methods, including in-house software, to answer the research question.

Honours Student - Novel Therapeutics for Ischemic Stroke - Calgary AB - 2010-2011

Development of a novel very mild hypothermic protocol and apparatus for improved outcomes following ischemic stroke.

Designed and built a temperature regulation system with capacity for six rodents (mice) at a time. Performed delicate micro-surgery model of stroke, tissue preparation, histology, immunohistochemistry, and data analyses. Resulted in **peer-reviewed publication**.

Education

MSc Candidate: Biomedical Engineering - University of Calgary - Present

Coursework including Image Processing, Biomedical Engineering, and Professional Development.

BHSc (Hons): Biomedical option - University of Calgary - 2011

Focus on Cellular Microbial Molecular Biology, Virology, Human Anatomy/Physiology, Organic Chemistry, Biochemistry, Cellular Biology, and Independent Research.

Social

