

Supervisor Contact Information	Research Project and Supervisor Preferences/Student Requirements
Dr. Janna Andronowski BioMedical Sciences Email: <a href="mailto:jandronowski@mun.ca">jandronowski@mun.ca</a>	<p><b>Research Project: Skeletal biology; 3D bone imaging; Forensic anthropology.</b></p> <p>Dr. Andronowski's research focuses on the high-resolution 3D imaging of bone microarchitecture and the study of bone adaptation, quality, and fragility associated with substance use. This project will explore differences in the cellular-level ultrastructure of bone in a diverse human sample using high-resolution 3D imaging (e.g., laboratory micro-CT, confocal microscopy, synchrotron micro-CT). Students will assist in bone imaging experiments and learn associated skills in image reconstruction, data processing, bone tissue processing and histology.</p> <ul style="list-style-type: none"> <li>• Biology, Biochemistry, Engineering, Computer Science, or Archaeology students in their 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> are preferred.</li> <li>• Experience in coding (e.g., C++, Python), basic image processing (e.g., ImageJ), and experience with statistics are an asset, but not required.</li> <li>• Wet lab experience is preferred, but not required.</li> </ul>
Dr. Shabnam Asghari Family Medicine Email: <a href="mailto:Shabnam.Asghari@med.mun.ca">Shabnam.Asghari@med.mun.ca</a>	<p><b>Research Project: Primary Healthcare, Rural Medical Education, Healthcare Innovation</b></p> <p>The team at the Centre for Rural Health Studies (CRHS) works to build capacity for rural health research. As part of this, faculty on the team work with rural physicians to develop new research ideas and facilitate their research projects. Students, with directed supervision, may assist with a number of related duties, including completing literature searches, writing/drafting, and performing data analysis, as required.</p> <ul style="list-style-type: none"> <li>• Interested in students in the 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> year of their program with a background in art and design, kinesiology, psychology, neuroscience, sociology, social work, nursing or geography (GIS). Will give consideration to students from other fields as well.</li> <li>• Students must be good writers. They will assist with KTE activities including infographics, pamphlets, and other course materials.</li> <li>• Students should have some experience with the research process and scholarly writing. This could come from coursework.</li> </ul>
Dr. Renelle Butt Family Medicine Email: <a href="mailto:renelle_butt@live.com">renelle_butt@live.com</a>	<p><b>Research Project: Primary Healthcare, Rural Medical Education, Healthcare Innovation</b></p> <p>This project is focused on supplying literary material to preschool children on a monthly/regular basis, to improve reading readiness and child interest in reading in rural NL. This project will be in partnership with the Dolly Parton's Imagination Library. This project is in the development stage. The student would be involved in literature searches, administrative work, and other activities as required.</p> <ul style="list-style-type: none"> <li>• Interested in students of any background; however, students studying education would be preferred. Prefer students who have completed one year of undergraduate studies.</li> <li>• The student must be capable of performing literature searches and working independently.</li> <li>• Oral and written communication skills are essential; ability to work independently on various tasks involved in project startup are required.</li> </ul>
Dr. Jessica Esseltine BioMedical Sciences Email: <a href="mailto:jesseltine@mun.ca">jesseltine@mun.ca</a>	<p><b>Research Project: Human stem cells and disease</b></p> <p>In the Esseltine lab, we use human stem cells and CRISPR-cas9 genetic engineering to model genetic disease. SURA students will learn techniques including stem cell culture, Western Blots, immunofluorescence microscopy and others.</p> <ul style="list-style-type: none"> <li>• 2<sup>nd</sup> or 3<sup>rd</sup> year Biochemistry or Biology students would be given preference.</li> <li>• No specific experience is necessary. We are looking for someone who is excited about research.</li> </ul>
Dr. Liam Fardy Medicine - Pediatrics Email: <a href="mailto:lfardy@mun.ca">lfardy@mun.ca</a>	<p><b>Research Project:</b></p> <p>We will be developing clinical guidelines for use on the Well Baby Unit (5NB) based on clinical evidence gathered through literature searches and through discussions with experts from the appropriate sub-specialties.</p> <ul style="list-style-type: none"> <li>• Students from science are preferred but all may apply. Should be in their 3<sup>rd</sup> or 4<sup>th</sup> year of undergraduate degree.</li> <li>• Should be comfortable with conducting literature searches using PubMed. No prior research experience necessary.</li> </ul>
Dr. Graham Fraser BioMedical Sciences Email: <a href="mailto:graham.fraser@med.mun.ca">graham.fraser@med.mun.ca</a>	<p><b>Research Project: Cardiovascular Sciences – Microvascular Blood Flow Regulation</b></p> <p>Projects will involve in vivo microvascular studies on the dynamic regulation of blood flow in response to endogenous metabolic stimuli.</p> <ul style="list-style-type: none"> <li>• 3<sup>rd</sup> or 4<sup>th</sup> year preferred but 2<sup>nd</sup> year considered from any program of study: Biology, Biochemistry, Engineering, Kinesiology, Physics, Mathematics, etc. are all suitable.</li> <li>• A basic science background is all that is required.</li> <li>• Prior research experience is not necessary but animal handling and general lab experience is an asset. Training for summer students in all areas needed for their project will be provided.</li> </ul>

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Dr. Curtis French BioMedical Sciences Email: <a href="mailto:curtis.french@med.mun.ca">curtis.french@med.mun.ca</a>	<p><b>Research Project:</b>            Research project will focus on the analysis of a zebrafish atp11a mutant strain. The ATP11A gene was identified as causing hearing loss in a Newfoundland family. Zebrafish are excellent model organism to study hearing loss, and thus we will use these atp11a mutant fish to try and figure out why it can cause deafness.</p> <ul style="list-style-type: none"> <li>• Students from biology or biochemistry in their 3<sup>rd</sup> year preferable.</li> <li>• Having taken a genetics course through biochemistry or biology would be an asset, but not necessary.</li> </ul>
Dr. Wendy Graham Family Medicine Email: <a href="mailto:wendy.graham@med.mun.ca">wendy.graham@med.mun.ca</a>	<p><b>Research Project: Primary Healthcare, Rural Medical Education, Healthcare Innovation</b>            The team at the Centre for Rural Health Studies (CRHS) works to build capacity for rural health research. As part of this, faculty on the team work with rural physicians to develop new research ideas and facilitate their research projects. Students, with directed supervision, may assist with a number of related duties, including completing literature searches, writing/drafting, and performing data analysis, as required.</p> <ul style="list-style-type: none"> <li>• Interested in students in the 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> year of their program with a background in art and design, kinesiology, psychology, neuroscience, sociology, social work, nursing or geography (GIS). Will give consideration to students from other fields as well.</li> <li>• Students must be good writers. They will assist with KTE activities including infographics, pamphlets, and other course materials.</li> <li>• Students should have some experience with the research process and scholarly writing. This could come from coursework.</li> </ul>
Dr. Delphine Grynszpan Community Health & Humanities Email: <a href="mailto:dgrynszpan@mun.ca">dgrynszpan@mun.ca</a>	<p><b>Research Project: Planetary health scholarship among students in health-related studies</b>            The project focuses on assessing the preexisting knowledge, interest and learning needs of students in applied health science programs about climate and environmental change issues and solutions. It will inform the developing field of planetary health education (peer-reviewed publications) as well as the development of programs within the university. Depending on timing, interest and skills, the applicant can work on a literature review, survey &amp; focus group design and/or data analysis.</p> <ul style="list-style-type: none"> <li>• Students with an interest in health, with a major in applied health or social sciences: biology, nutrition, earth sciences, psychology, nursing, kinesiology, pharmacy, anthropology or sociology.</li> <li>• Familiarity with qualitative research methods, including survey design and focus-group design preferred. Interest in planetary health issues.</li> <li>• Either prior qualitative research experience or completion of a course in qualitative study methodology (surveys, focus groups) necessary.</li> </ul>
Dr. Connie Hapgood Medicine - Radiology Email: <a href="mailto:connie.hapgood@easternhealth.ca">connie.hapgood@easternhealth.ca</a>	<p><b>Research Project: Breast Cancer</b>            Radiology plays an essential role in breast cancer diagnosis. This audit aims to assess the abnormal recall rates of local breast imaging studies such as mammogram and breast MRI, comparing the rates to national standards. This quality control measure aims to limit patient anxiety by addressing false positives as a result of high recall rates. This audit also aims to assess time to diagnosis in radiology as it relates to breast cancer diagnosis. The length of time between when an abnormality is detected on breast imaging, to time of biopsy and to time of surgery will be assessed locally. Information obtained from this audit will help guide educational initiatives and departmental practices in breast cancer detection, management and timely access to treatment. This in turn positively influencing patient center care for breast cancer patients.</p> <ul style="list-style-type: none"> <li>• No required degree program/field of study; can apply in any year of study.</li> <li>• Must have knowledge of excel; knowledge of basic stats would be an asset but not required.</li> </ul>
Dr. Michiru Hirasawa BioMedical Sciences Email: <a href="mailto:michiru@mun.ca">michiru@mun.ca</a>	<p><b>Research Project: Effect of chemotherapy drugs on brain functions</b>            Chemotherapy is common, effective cancer treatment. However, its neurotoxic side effects can be debilitating and dose-limiting, often affecting treatment efficacy, adherence and quality of life of patients. Understanding the mechanisms is paramount for developing therapeutic strategies for these neurological adverse effects. To this aim, we use a mouse model to study the chemotherapy effects on the brain and resulting impact on behavior.</p> <ul style="list-style-type: none"> <li>• We are looking for a student with strong interest in biomedical research; professionalism skills.</li> </ul>

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Dr. Jo-Anna Hudson Medicine - Pediatrics (Neonatology) Email: <a href="mailto:Joanna.hudson@easternhealth.ca">Joanna.hudson@easternhealth.ca</a>	<p><b>Research Project:</b>            Completing provincial epidemiology database moderate and late preterm infants and sourcing specific chart review for quality improvement initiatives. Work would include chart review and data entry.</p> <ul style="list-style-type: none"> <li>• Students can apply from any area; preferably 2<sup>nd</sup> or 3<sup>rd</sup> year.</li> <li>• Must have knowledge of mechanics of chart review work.</li> <li>• Prior research experience preferred but not necessary.</li> </ul>
Dr. Chris Kovacs Medicine - Endocrinology & Metabolism Email: <a href="mailto:ckovacs@mun.ca">ckovacs@mun.ca</a>	<p><b>Research Project: The role of PTHrP in regulating maternal calcium homeostasis during pregnancy</b>            Parathyroid hormone-related protein (PTHrP) increases in the maternal circulation during pregnancy and may affect mineral homeostasis in the mother and fetuses. We have preliminary data to indicate this. We will treat normal pregnant mice with either a monoclonal antibody directed against PTHrP or a control antibody, and determine the effects of removing PTHrP on maternal serum chemistries and calcitropic hormones, and fetal serum chemistries, calcitropic hormones, and skeletal mineral content.</p> <ul style="list-style-type: none"> <li>• Biology or biochemistry background preferred but not mandatory. Prior research not required but would be an asset.</li> <li>• No prior skill sets needed; student will be taught everything so no requirements to be in a particular year of a program.</li> </ul>
Dr. Maisam Najafizada Community Health & Humanities Email: <a href="mailto:maisam.najafizada@med.mun.ca">maisam.najafizada@med.mun.ca</a>	<p><b>Research Project: Health literacy and global mental health</b>            This project aims to translate knowledge on global mental health for general public using social media.</p> <ul style="list-style-type: none"> <li>• Open to all students; 3<sup>rd</sup> or 4<sup>th</sup> year preferred.</li> <li>• Experience of content creation for social media, knowledge of SEO, and knowledge of machine learning and natural language processing.</li> </ul>
Dr. Chris Patey Family Medicine Email: <a href="mailto:pateycp@gmail.com">pateycp@gmail.com</a>	<p><b>Research Project: Emergency Medicine, Rural Family Medicine, Healthcare Quality Improvement</b>            The SurgeCon study is a research initiative looking to improve emergency department wait times and patient satisfaction. The student selected for this SURA position will collaborate with senior research staff working on SurgeCon project and Eastern Health's multimedia department to develop audio/video content that will be used for an online training course.</p> <ul style="list-style-type: none"> <li>• Students with theatre, film studies, visual arts, etc. preferred.</li> <li>• We would like to select a student with experience developing scripts for audio/video content and experience developing storyboards for video content. Students in their 2<sup>nd</sup> or 3<sup>rd</sup> year with previous experience preferred.</li> </ul>
Dr. Tevye Stachniak BioMedical Sciences Email: <a href="mailto:tstachniak@mun.ca">tstachniak@mun.ca</a>	<p><b>Research Project:</b>            We will examine how early activity sculpts the development of sensory cortex. Interneurons arrange themselves in a stereotypical architecture that funnels neural activity through defined channels. Using confocal microscopy and image analysis of pre-stained mouse brain tissue, the student will test whether early brain activity controls the stereotypical architecture of whisker sensory cortex.</p> <ul style="list-style-type: none"> <li>• Students in a program relating to biological sciences are preferred. Engineering or physics students with an interest in electrophysiology are also welcome.</li> <li>• Data or image analysis experience is an asset.</li> </ul>
Dr. Peter Wang Community Health & Humanities Email: <a href="mailto:pwang@mun.ca">pwang@mun.ca</a>	<p><b>Research Project: Epidemiology</b>            Over the last three years, my research team has undertaken various surveys to evaluate the influence of the COVID-19 pandemic on Chinese immigrants in Canada. The successful candidate will have opportunities to analyze data and produce a report or manuscript on a chosen subject.</p> <ul style="list-style-type: none"> <li>• Students possessing a certain level of proficiency in biostatistics and/or epidemiology are preferred.</li> <li>• Familiarity with one of the following statistical packages is a bonus: SAS, SPSS, STATA, and R</li> <li>• Prior research preferred but not necessary; good English writing skills preferred.</li> </ul>