



UNIVERSITY OF SASKATCHEWAN

School of
Rehabilitation ScienceCOLLEGE OF MEDICINE
REHABSCIENCE.USASK.CA104 Clinic Place
Saskatoon, SK S7N 2Z4 Canada
Telephone: 306-966-6579
Fax: 306-966-6575**Faculty Project Proposal for MPT Research Projects 2023-24****Personal Information**

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Project Details

Project Title:	Does Occupational Vibration Exposure Contribute to an Altered Protein Profile Consistent with the Effects of Concussion?: Review of Literature		
Expected Start Date:	24 th March 2024		
Project Length:	<input checked="" type="checkbox"/> Full Project (300 Hours)	<input type="checkbox"/> Half Project (150 Hours)	
Project Level	<input type="checkbox"/> First Year	<input type="checkbox"/> Second Year	<input checked="" type="checkbox"/> First or Second Year
Project Type:	<input type="checkbox"/> Clinical	<input checked="" type="checkbox"/> Biomedical	<input type="checkbox"/> Quality Improvement
<input type="checkbox"/> Retrospective Chart Review		<input type="checkbox"/> Other (specify):	
Will this project be linked to a research clinical placement?			<input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
If yes, have you received approval from the Academic Coordinator of Clinical Education? Please attach a letter of support			<input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No

Project Description

Include background, research topic, and description of general duties.

Recent evidence suggests altered cognitive function from exposures to occupational whole body vibration (WBV). High WBV is considered a potential contributor to micro-concussions. Ongoing research in our lab is observing cognitive decrements in an animal model of WBV exposure. Concussion in both humans and animals also demonstrates decrements in cognition. Preliminary research has identified protein markers in biospecimens consistent with concussion. Further investigations need to explore alterations to the global protein spectrum from exposure to WBV.

Prior to further lab experiments in an animal model the research team needs to identify what is current in the literature relative to protein expression in concussion and/or WBV. This research will involve the student working with Dr. Stephan Milosavljevic in conjunction with Dr. George Katselis (proteomics specialist) and his team in the Canadian Centre for Rural and Agricultural Health to firstly understand the concept of the adverse effects of WBV, and then create a structure and process to undertake a literature review to explore the evidence from these effects.

With guidance from the supervisors and Health Sciences librarians, the student will then use a suite of library databases (e.g., Medline, Scopus, etc.) in a systematic manner to search for literature pertinent to the research topic, and then compile this into a report to be used as a resource for current and future laboratory-based investigations. The final report will be presented in both poster and manuscript formats.