



## Postdoctoral Researcher to Lead a Sports Brain Injury Study at the University of British Columbia

We would like to invite candidates for a multidisciplinary project investigating the relationship between head impact exposure, concussion biomechanics, and brain structural as well as functional changes at the University of British Columbia (UBC). This is a multi-year project funded by the Canadian Institutes of Health Research (CIHR) Project Grant, and led by principal investigators Dr. Lyndia Wu ([website](#)), Dr. Alex Rauscher ([website](#)), and Dr. Paul van Donkelaar ([website](#)).

Concussion, or mild traumatic brain injury, is a major public health concern. The injury mechanism and pathology are poorly understood, resulting in ineffective prevention, diagnosis and treatment. Alarming, mounting evidence indicates that even subconcussive / subclinical head impacts may be associated with long-term brain changes. In this project, our goal is to prospectively and longitudinally investigate the effects of both concussions and subconcussive head impacts in varsity competitive ice hockey players. We will apply state-of-the-art wearable head impact sensors, novel UBC-developed myelin water imaging techniques, award-winning quantitative susceptibility mapping methods, and unique sensitive neurocognitive tests in a rigorous study design where we will gather pre-injury baseline data as well as monitor brain structural / functional changes longitudinally.

This postdoctoral position is at minimum a 2-3 year appointment and will provide an opportunity to lead the large multidisciplinary field study as well as the analysis of multi-modal, multi-dimensional biomechanics, neuroimaging, and neurocognitive data, with the potential to make novel discoveries in the mechanism and recovery of mild traumatic brain injury.

Desired qualifications:

- PhD in mechanical engineering, bioengineering, physics, neuroimaging or related fields.
- Expertise in biomechanics, neuroimaging, or related areas.
- Past experience in human participant field studies, especially with sports populations.
- Past experience or demonstrated potential in managing large-scale multi-lab studies.

To apply, please e-mail Dr. Wu at [lwu@mech.ubc.ca](mailto:lwu@mech.ubc.ca) with the following information by Oct. 15, 2020.

- Email title containing “[CIHR Hockey Study Postdoc Application]”
- A brief statement of research experiences and interests
- Curriculum vitae
- Contact information for at least 2 references

UBC's Vancouver campus is situated at the tip of Point Grey on the unceded lands of the Musqueam people, surrounded by forest, ocean and mountains. Vancouver is consistently ranked as one of the most diverse cities in Canada, and one of the most livable cities in the world. UBC seeks to recruit and retain a workforce that is representative of Vancouver's diversity, to maintain the excellence of the University, and to offer students richly varied disciplines, perspectives and ways of knowing and learning.

Equity and diversity are essential to academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Metis, Inuit, or Indigenous person.