MITACS grant: A study on the reliability of quantitative measures of the visual system and their correlation with change in concussion-associated symptoms

Project Description
Many patients with concussions have prolonged symptoms that appear similar to other diseases known to affect the visual system. In addition to office-based tests, there exist a series of more sophisticated tests (e.g., 3D spatial, convergence) that may be potentially useful in clinical management of concussions but they have not been adequately validated. We are evaluating the test-retest reliability of these visual system tests in athletes without concussion. We are also conducting a prospective longitudinal study to determine if the change in symptoms in athletes with concussions correlates with the changes in the results of these sophisticated tests of the visual system. We are enrolling athletes with concussions that occurred within the previous 7-60 days and follow them for 2 months. The students’ roles will include review of the literature, project management, data acquisition, data analysis and authorship on manuscripts.

Who We Are
The student will work under the supervision of Dr. Ian Shrier, who is a sport medicine physician and epidemiologist at the Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital. The collaborators on this project include Dr. Suzanne Leclerc who is the chief medical officer and sport medicine physician for the Institut National du Sport du Quebec, and David Tinjust PhD who is the founder of the company Apexk that uses the sophisticated visual system measures as part of their clinical management.

This grant requires students to spend 50% of their time with academia (Dr. Shrier) and 50% of their time with industry (Institut National du Sport du Quebec and Apexk). Our industry partners include the company that uses the sophisticated visual system measures as part of their clinical management, and the Institut National du Sport du Quebec.

Positions offered
- One part-time positions (10 hours per week) for 6 months.
- Stipend of $10,000 per 6-month period, plus conference expenses to present results
- Start: Oct or Nov 2017

Qualifications Required & Preferred
- Must be currently enrolled in a MSc or PhD program at McGill University, or as a postdoctoral fellow. The work may be considered part of a thesis, or independent of a thesis
- Interest in injury epidemiology or concussion or dizziness a strong asset
- Experience with database management preferred.
- Please forward a cover letter and CV to ian.shrier@mcgill.ca