MSc or PhD Studies in Osteoarthritis and Chondrocyte Mechano-transduction

Start Date: September 2016

2 masters and 1 doctoral position are currently available for research projects investigating the molecular mechanisms of knee osteoarthritis and chondrocyte transduction of osmotic stress. Specifically, students will elucidate the roles of chondrocyte primary cilia in transducing osmotic stress, and integrin α1β1 in protecting the knee from osteoarthritis. The interplay between the collagen receptor integrin α1β1 and growth factor receptors such as transforming growth factor β receptor 2 and epidermal growth factor receptor in the development of spontaneous (with old age) osteoarthritis will be assessed.

Experimental work will take place in the Department of Human Health and Nutritional Sciences at the University of Guelph and will be carried out in collaboration with colleagues within Canada and the USA. These projects are currently funded by CIHR and the University of Guelph. Completion of WHMIS, lab safety and biosafety training provided by the University of Guelph will be required of the chosen candidates upon acceptance into the program.

Candidates for masters studies should have a BSc, and for doctoral studies an MSc, or equivalent in Cell Biology/Tissue Biomechanics or a related field and have a strong laboratory based research experience. An enthusiastic, self-motivated and hard working person with strong interpersonal and communication skills is required. The chosen candidate will be competitive for and expected to apply to NSERC or CIHR for external stipend support. Experience working with rodents and/or microCT, confocal microscopy, histology or immunohistochemistry techniques would be an asset.

Interested candidates should send their unofficial transcript and an updated CV to:

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