MSc and PhD Opportunities in the Queen's Muscle Physiology Lab

The Queen's University Muscle Physiology Lab (QMPL) is accepting applications to the SKHS graduate research program at both MSc and PhD levels. Successful applicants will be supervised by Dr. Brendon Gurd.

Dr. Gurd is committed to providing research opportunities to BIPOC students. If you identify as a BIPOC student and are interested in nutrition and exercise metabolism you are highly encouraged to apply. If you are comfortable doing so please identify yourself as BIPOC in your application.

Research Program

Human skeletal muscle possesses the ability to respond to energetic stress by increasing both the quantity and quality of its mitochondria. The mechanisms that determining the induction of this process, termed mitochondrial biogenesis are incompletely understood. The long-term goal of Dr, Gurd's NSERC-Funded research program is to advance our understanding of the mechanisms that control mitochondrial biogenesis in human skeletal muscle.

Over the next 5 years Dr. Gurd will seek to resolve 3 knowledge gaps in our current understanding of the mechanisms that control mitochondrial biogenesis: 1) how pre-transcriptional control of mitochondrial biogenesis is achieved, 2) the relationship between increases in mRNA, protein content and mitochondrial protein synthesis (MitoPS) following exercise, and 3) how the full series of independently regulated molecular events that culminate in the synthesis of new mitochondrial protein are regulated.

Dr. Gurd's research is conducted exclusively in human skeletal muscle and utilizes the percutaneous biopsy technique to obtain human muscle samples. Because studies are conducted in humans, most research studies utilize an integrative approach that includes physiological and performance testing in addition to molecular analyses.

Interested Applicants

Interested applicants should contact Dr. Gurd via email (gurdb@queensu.ca) to set up an initial conversation about grad school and the QMPL. Initial email should include a copy of the applicants CV and transcript and a brief cover letter that highlighting experiences and motivations relevant to working in the QMPL.

Any questions on the application process can be sent directly to Dr. Brendon Gurd via email