

School of Kinesiology Distinguished Speaker Series

David Wright, PhD

Department of Human Health and
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Exercise-activated pathways to offset the metabolic side effects of anti-psychotic drugs

Second generation anti-psychotic (SGA) drugs are used in the management of schizophrenia and are increasingly being prescribed off-label for conditions including anxiety, bi-polar disorder and ADHD. While effective in reducing psychoses, SGAs predispose individuals to weight gain and the development of cardiovascular disease and type 2 diabetes. This talk will highlight the utility of exercise, and exercise-activated pathways, including the energy sensing enzyme 5'AMP activated protein kinase (AMPK), as counter measures to SGA-induced perturbations in glucose metabolism. Work using pre-clinical models will be discussed and the translatability to clinical populations will be touched upon.

Mary-ellen Harper, PhD

Department of Biochemistry,
Microbiology and Immunology,
Faculty of Medicine,
University of Ottawa



Skeletal muscle mitochondrial efficiency in diet-sensitive and diet-resistant obesity

ATP production by mitochondrial oxidative phosphorylation (OXPHOS) is far-from-perfect. The mechanisms controlling OXPHOS efficiency (i.e., the amount of ATP generated per unit oxygen consumed) are poorly understood but involve mitochondrial proton leaks, and possibly mitochondrial supercomplexes. We have been examining the mechanisms and implications of variable OXPHOS efficiency in various disease contexts, including diet-resistant obesity. This talk will highlight potential molecular mechanisms from our studies of cohorts of the ~5000 patients who have completed the Ottawa Hospital Weight Management Program

January 16, 2020 | 12:30 – 2:00

Chan Gunn Pavilion, Seminar Room 200

Host: Dr. Robert Boushel, School of Kinesiology

11:45 - 12:30 Light Lunch