



## **STUDENT AND NEW PROFESSIONAL** **ÉTUDIANT ET NOUVEAU PROFESSIONNEL**



### Department of Pediatrics: Announcement for CON-SNP@Mac

Two graduate students, Katarina Marcinko and Emily Hayes, presented their prestigious work this past month at the CON-SNP@Mac monthly research seminars in nutrition and metabolism.

Katarina, Masters student working with Dr. Gregory Steinberg, started off the seminar by discussing her current research with AMPK signaling of acetyl coA carboxylase (ACC) in non-alcoholic fatty liver disease (NAFLD) and hepatic insulin resistance. Currently, there is no direct in vivo genetic evidence supporting the role of AMPK and ACC as being critical for mediating the preventative effects of exercise on NAFLD and hepatic insulin resistance. She investigated the mechanisms by which exercise prevents NAFLD in mice having a targeted knock-in alanine mutation of ACC1 Ser79 and ACC2 Ser221 (DKI), and determined that AMPK is indeed an important signaling contributor.

Maternal obesity is an important focus in the field of obesity-related research, because current findings suggest that fetal health outcomes can be influenced by maternal health during pregnancy. Obesity has a significant impact on maternal metabolism and thus may influence offspring development and health later in life. To better understand this issue, Emily Hayes, Masters student with Dr. Sandy Raha, is working with a novel rat model that aims to address this concern. In her model, Emily determined that fetal and neonatal health was adversely affected with maternal obesity, with an increase in stillbirths and in utero death. Emily also found that the maternal placenta is hypoxic and that vascularization is altered during obesity, which may play a role in linking maternal obesity to detrimental pregnancy outcomes.

The CON-SNP@Mac would like to thank Katarina and Emily for their presentations. We also acknowledge Goodness Me Natural Foodmarket Locke St. for providing nutritious refreshments. The next Academic Seminar is on Thursday March 31st, 2011, from 4-5pm in MDCL 3022. This seminar will feature Dr. Marcus Manocha's work. The title of his presentation is: The 2D apoB peptide assay: development of a novel assay to assess apolipoprotein B-100 conformation and topology in a native serum LDL particle. All are welcome to attend.

The purpose of the monthly CON-SNP@Mac Academic Seminars is to unify individuals in various stages of training and professions (including clinical and academic) with a common interest in obesity, nutrition and metabolism-related research. Graduate students, faculty members and clinicians who are interested in being a guest speaker for an academic seminar are encouraged to contact the CON-SNP@Mac exec. Visit us on the web by accessing [www.con-snp.ca](http://www.con-snp.ca) and clicking on the McMaster Chapter link.

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