Lausanne Integrative Metabolism and Nutrition Alliance (LIMNA)

SEMINAR

Wednesday March 26, 2014
2.00pm

Carl JULIEN, Post-doc, Ph.D.
Labs of Dr. Alex Parker and Pierre Drapeau, Pathology and Cellular Biology, Department of Neurosciences, Université de Montréal, CRCHUM, Montréal, Québec, CANADA

“Molecular mechanisms involved in neurodegenerative diseases: a genetic, environmental and biological factors study.”

Hosts: Kristina Schoonjans and Johan Auwerx

Conference Room: AI 1153 (*)
EPFL - Lausanne

Abstract
For many neurodegenerative diseases, environmental and biological factors may interfere with genetic susceptibilities and lead or not to disease manifestation. Here, we found changes in fatty acid profiles from human brain samples of Alzheimer’s disease (AD) and Parkinson’s disease (PD) patients and a decrease of SIRT1 levels in AD brain. We also observed in mouse models of type 1 and type 2 diabetes and in mice anesthetized an aggravation of tau and Aβ pathologies, the two hallmarks of AD. We also found changes in synaptic markers and in brain fatty acid profiles in mice fed a high-fat diet. Moreover, using genetic models in C. elegans and mouse, we observed involvement of endoplasmic reticulum (ER) stress pathway, the DNA-binding proteins TDP-43 and FUS, and the secreted growth factor progranulin in polyglutamine (polyQ) toxicity found in Huntington’s disease (HD). We also investigated drugs targeting these pathways to identify disease modifiers.

(*) IMPORTANT NOTICE: All external participants have to pass through SV Reception/Welcome Desk to be able to access to AI 1153. Contact person to call at arrival at SV Reception Desk: Johan Auwerx 30951 / Administrative Assistant: 39522.