LIMNA
Lausanne Integrative Metabolism & Nutrition Alliance

SEMINAR

LAUSANNE INTEGRATIVE METABOLISM AND NUTRITION ALLIANCE (LIMNA)

Wednesday October 7, 2015 at 2.00pm
Conference Room: AI 1153 (*) EPFL – Lausanne

David J. Pagliarini, Ph.D.
Director and Nielsen Chair of Metabolism, Morgridge Institute for Research / Associate Professor of Biochemistry, University of Wisconsin-Madison, USA

"Mitochondrial proteins, pathways, and pathogenesis"

Host: Johan Auwerx

Abstract:
Mitochondrial dysfunction is associated with a spectrum of rare inborn errors of metabolism and an increasing number of common diseases, including Parkinson's, Alzheimer's, various cancers and type 2 diabetes. However, the nature and cause of this dysfunction is quite often confounding or unclear. Central to this problem is the recent realization that mitochondria are much more complex than once thought and possess hundreds of proteins with no known biochemical functions. Elucidating the biochemical functions of these proteins has become a major bottleneck in understanding basic mitochondrial biology and the pathophysiology of mitochondria-related disorders. The long-term significance of my research program is to widen this biomedical bottleneck by accelerating the functional annotation of key disease-related "orphan" mitochondrial proteins (OMPs), thereby taking an important first step toward rational therapeutic design for many mitochondrial diseases. We do so by first designing large-scale mass spectrometry and computational analyses designed to make initial connections between OMPs and known mitochondrial pathways and processes, and then employing mechanistic and structural approaches to define the functions of select OMPs at biochemical depth.

(*) 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.