LIMNA
Lausanne Integrative Metabolism & Nutrition Alliance

SEMINAR

Tuesday April 12th, 2016 – 13h30
Conference room AI 1153 (*) - EPFL - Lausanne

Dr. José Antonio Enriquez
Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III - Madrid (Spain)

Genetic variability and OXPHOS function

Host: Prof. Johan Auwerx

Abstract:
Mitochondria have a significant impact on the major cellular signaling axes: phosphorylation, acetylation, oxidation-reduction, and protein stabilization and turnover (prolylhydroxylases/HIF). At the core of this activity lies the mitochondrial respiratory chain and the H+-ATP synthase: the OXPHOS system. The OXPHOS system is two fold unique, it is the only process in animal cells that requires components encoded by two genomes, mitochondrial DNA (mtDNA) and nuclear DNA (nDNA). This implies a tight co-evolution of the two genomes. However, genetic variability is generated at different rates and by different mechanisms in both genomes. In addition, the OXPHOS system is responsible in the same physical structure of critical metabolic functions that can be contradictory between them. How this is adjusted is still under debate.

(*) 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.

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