LIMNA
Lausanne Integrative Metabolism & Nutrition Alliance

SEMINAR

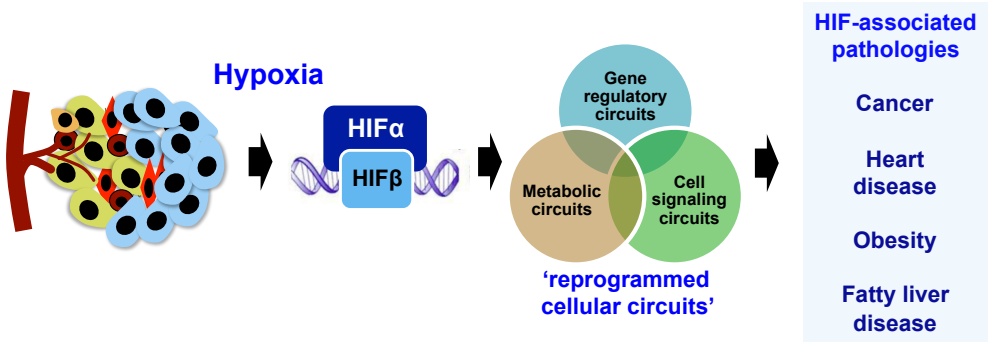
Monday June 20, 2016 - 12h15
Department of Physiology, Bugnon 7, 1005 Lausanne
seminar room, 6th floor

Prof. Krek Wilhelm
ETH Zürich, Department of Biology, Molecular Health Sciences

HIF signalling and disease pathogenesis : enacting RNA processing and metabolic circuits

Host: Prof. Christian Widmann

Hypoxia represents a signature feature of a broad range of human pathologies including cancer and heart disease. It arises due to a mismatch between oxygen demand by cells in tissues and supply by the vasculature, and is invariably associated with activation of its central transcriptional mediators, the hypoxia-inducible factors (HIFs). HIFs provoke an adaptive transcriptional program embracing coding and non-coding RNA transcripts that drive multiple characteristics of the disease phenotype including altered metabolism, angiogenesis, growth and survival. Efforts to characterize cell context-dependent responses to hypoxia led us recently to discover RNA processing and fructose metabolism as previously unknown aspects of HIF-associated pathologies.



References
Mirtschink P, Krishnan J, Grimm F, Sarre A, Hörl M, Kayikci M, Fankhauser N, Christinat Y, Cortijo C, Feehan O, Vukolic A, Sossalla S, Stehr SN, Ule J, Zamboni N, Pedrazzini T, Krek W. HIF-driven SF3B1 induces KHK-C to enforce fructolysis and heart disease. Nature 2015, 522:444-9. doi: 10.1038/nature14508.

Mirtschink P and Krek W. Hypoxia-driven glycolytic and fructolytic metabolic programs: pivotal to hypertrophic heart disease. Biochim Biophys Acta., 2016 doi: 10.1016/j.bbamcr.

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