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ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

SEMINAR (informal)

Tuesday August 13, 2013

10.30am

Vera LEMOS

Graduate Program in Basic and Applied Biology (GABBA), University of Porto, Portugal

"Sirtuin 2 and insulin resistance: is there a connection?"

Hosts : Kristina Schoonjans and Johan Auwerx

Conference Room: AI 1153
EPFL - Lausanne

Abstract

Since the beginning of this century, the sirtuin family (SIRT1–SIRT7) of mammalian NAD^+-dependent deacetylases and/or ADP ribosyltransferases has received much attention for its regulatory role in a plethora of cellular functions. The dependence of sirtuins on NAD^+ links their enzymatic activity to cellular metabolic status. Indeed, emerging evidence suggests a role for sirtuins in the regulation of various metabolic pathways in response to nutrient availability. Our results showed that SIRT2 expression is downregulated in insulin-resistant cells and tissues, and this is paralleled by increased oxidative stress levels and mitochondrial dysfunction. By using *in vitro* cell based studies complemented with whole animal and human studies, we aimed at strengthening SIRT2's position as a future target for the prevention and/or treatment of the current epidemic of metabolic disorders, such as insulin resistance.