Département de psychiatrie
Centre de neurosciences psychiatriques
Site de Cery
CH-1008 Prilly - Lausanne

Centre de Neurosciences Psychiatriques

CNP SEMINAR

ANNOUNCEMENT

Friday, October 12, 2012, 11:00 hrs

"Functional impact of PPARγ deletion in intestinal epithelial cells"

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PPARγ (peroxisome proliferator-activated receptors gamma) is a nuclear receptor mostly known as master regulator of adipogenesis. It is a vital factor involved in metabolism and development. In the intestine it has been shown that PPARγ exhibits anti-inflammatory properties and prevents cancer progression. However its role in energyturnover or nutrients uptake has never been reported. Within our project we study PPARγ as a factor playing a role in crosstalk between diet, gut flora and inflammation. Currently, we mostly concentrate on role of PPARs in intestinal metabolism and energy uptake. We want to verify whether PPARγ, known to be activated by polyunsaturated fatty acids and other dietary lipids, serves as a ""metabolic sensor"" in the intestine and what are the consequences of its activity. Using intestine epithelium specific knockout (KO) approach we are able to explore novel functions of PPARγ in the gut. Our data imply that certain nutritional products influence metabolism in the intestine, energy uptake, hormonal regulation and appetite through activation of PPARγ. Interestingly, we observed that PPARγ KO mice are more mobile than wild type (WT) mice and that its locomotor activity profile resembles the one of fasted WT mice. The observed increased motility phenotype of PPARγ KO brings new perspective in our view of intestine-brain signaling and direct connection between diet and behavior.

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