



Centre de Neurosciences Psychiatriques

CNP SEMINAR

ANNOUNCEMENT

Friday November 22nd 2024, 11:00 to 12:00

“Gut-sensing mechanisms in health and diseases”

By Prof. Virginie Mansuy-Aubert

Summary

The data to be presented will utilize genetically modified models, metabolic and behavior analyses to shed light on how gut microbiota-derived metabolites may mediate effect on satiety and pain pathways.

Invited by Benjamin.boutrel@chuv.ch

Short Bio

Virginie earned her PhD in Biochemistry and Molecular Biology. She began her career at the Sanford-Burnham Institute, focusing on insulin sensitivity and obesity in peripheral metabolic tissues, such as the liver, heart, muscle, and adipose tissues. In 2013, she moved to UT Southwestern Medical Center in Dallas, within the Division of Hypothalamic Research, where she developed projects aimed at enhancing our understanding of neural control over peripheral metabolism and pain.

In 2015, Virginie established her independent lab at Loyola University Chicago's Stritch School of Medicine, in the Department of Cell and Molecular Physiology. In 2022, she was recruited as an associate professor at the University of Lausanne, where her lab now resides. Virginie's current research centers on gut-brain communication, and she serves as Vice President of the Fundamental Sciences Section within the Faculty of Biology and Medicine.

Publications

-Cook TM, Mansuy-Aubert V. Communication between the gut microbiota and peripheral nervous system in health and chronic disease. *Gut Microbes*. 2022 Jan-Dec;14(1):2068365. doi: 10.1080/19490976.2022.2068365. PMID: 35482894; PMCID: PMC9067538.

-Cook TM, Gavini CK, Jesse J, Aubert G, Gornick E, Bonomo R, Gautron L, Layden BT, Mansuy-Aubert V. Vagal neuron expression of the microbiota-derived metabolite receptor, free fatty acid receptor (FFAR3), is necessary for normal feeding behavior. *Mol Metab*. 2021 Dec; 54:101350. doi: 10.1016/j.molmet.2021.101350. Epub 2021 Oct 6. PMID: 34626852; PMCID: PMC8567301.

-Bonomo RR, Cook TM, Gavini CK, White CR, Jones JR, Bovo E, Zima AV, Brown IA, Dugas LR, Zakharian E, Aubert G, Alonzo F 3rd, Calcutt NA, Mansuy-Aubert V. Fecal transplantation and butyrate improve neuropathic pain, modify immune cell profile, and gene expression in the PNS of obese mice. *Proc Natl Acad Sci U S A*. 2020 Oct 20;117(42):26482-26493. doi: 10.1073/pnas.2006065117. Epub 2020 Oct 5. PMID : 33020290; PMCID: PMC7584890.

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