

BRAIN & COGNITION SEMINAR

Dr Jessica Peter

(University of Bern, Switzerland)

“Non-pharmacological interventions to enhance memory”

Tuesday

April 23, 2024

12:15 to 13:15 pm

Campus Biotech

Auditorium

& Zoom :

<https://unige.zoom.us/j/62694444617?pwd=T2wzQWNMMk9DTEVXZFhwRW94RXEwQT09>

Meeting ID: 626 9444 4617

Passcode: 617330

Abstract : My research is about memory of the past and memory of the future. In this talk I will present studies, in which these processes were modulated using non-pharmacological interventions in younger and older healthy adults as well as in patients with depression or with a neurodegenerative disorder. One of my particularly innovative interventions is real-time fMRI neurofeedback. I have used this method in a study in healthy older adults and patients with Mild Cognitive Impairment (MCI). Participants learned to regulate activity of their own hippocampus with the goal to enhance episodic memory. Real-time fMRI neurofeedback may give patients with MCI a sense of empowerment as they themselves regulate activity without having to ‘depend on’ e.g., taking medication. The study also provided insight into mental strategies that participants have successfully used to regulate hippocampal activity. Such strategies will now be included in a new study without the need to use neurofeedback.

Another focus of my research is the development of a human model to improve the basic understanding of what governs episodic memory formation using transcranial direct current stimulation to modulate the hippocampus indirectly. I have systematically tested areas of stimulation (left or right prefrontal cortex) and task instructions (intentional vs. incidental) to answer the question who will benefit from stimulation and when. Such knowledge is key to then understand what goes wrong in disorders, for instance Alzheimer’s disease or depression.

HUG

("salle visio") Salle des conférences
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Host : Dre Lucie Bréchet

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