



# Centre de Neurosciences Psychiatriques

## CNP SEMINARS

### ANNOUNCEMENT

#### Neuronal encoding of drug choices and preference in the orbitofrontal cortex

Friday, December 11, 2020, 11:00 – 12:00

**Dr Karine Guillem Ph.D.**

CNRS, Institut des Maladies Neurodégénératives, Bordeaux, France

Human neuroimaging research has consistently shown that drug addiction is associated with structural and functional changes within the orbitofrontal cortex (OFC). In view of the important role of the OFC in value-based decision-making, these changes have been hypothesised to bias choice towards drug use despite and at the expense of other competing pursuits, thereby explaining drug addiction. Here I will present in vivo recording data in the OFC supporting this hypothesis in a choice-based model of addiction where rats could choose between two actions, one rewarded by a drug (cocaine or heroin), the other by a nondrug alternative (saccharin).

#### **Related publications**

*Guillem K, Ahmed SH. Reorganization of theta phase-locking in the orbitofrontal cortex drives cocaine choice under the influence. **Scientific Reports (2020)**, 10:8041*

*Guillem K & Ahmed S.H. A neuronal population code for resemblance between drug and nondrug reward outcomes in the orbitofrontal cortex. **Brain Struct Funct (2019)**, 224:883-890*

*Guillem K & Ahmed SH. Preference for cocaine is represented in the orbitofrontal cortex by an increased proportion of cocaine use-coding neurons. **Cereb Cortex (2018)**, 23:819-832*

Invited by Y. Vandaele

[youna.vandaele@chuv.ch](mailto:youna.vandaele@chuv.ch)

This event will take place on a virtual space on **Friday, December 11<sup>th</sup> at 11:00** through the link:

<https://chuv.webex.com/chuv/j.php?MTID=m10f36b08e48ab1e26d9dba3faeba0927>

Meeting number (access code): 174 305 3588

Meeting password: jhR5gSmm4e3