

SEMINAR

iBrain



Vendredi 14 février 2025

11h-12h, Amphi D - Faculté de Médecine, Université de Tours

Time in memory & fear : a role for the amygdala networks



Dr Valérie DOYERE

NeuroPSI
PARIS-SACLAY INSTITUTE OF NEUROSCIENCE

université
PARIS-SACLAY



SEMINAR ABSTRACT

The time interval between events is critical in forming associations, building memory, and creating temporal expectancy. A series of experiments in rats uncovers how the time interval between events is very rapidly learned and encoded in the brain, particularly in the context of fear/threat conditioning. The findings highlight the role of the basolateral amygdala and its functional connectivity with prefronto-striatal networks in modulating and controlling the expectancy of reinforcers, including threats, especially in their temporal dimension.

SELECTED PUBLICATIONS

- Doyère & Droit-Volet "When emotion and time meet from human and rodent perspectives: a central role for the amygdala?" 2025, **Cereb Cortex**, 35, 34-41
- Rolando et al. "Distinct neural adaptations to time demand in the striatum and the hippocampus" 2024, **Current Biology**, 34, 156-170
- Balci et al. "A response to claims of emergent intelligence and sentience in a dish" 2023, **Neuron**, 111, 604 - 605
- Kononowicz et al. "Rodents monitor their error in self-generated duration on a single trial basis" 2022, **PNAS**, 119, e2108850119
- Dallérac et al. "Updating Temporal Expectancy of an Aversive Event Engages Striatal Plasticity under Amygdala Control" 2017, **Nature Communication**, 8, 13920
- Diaz-Mataix et al. "Detection of temporal error triggers reconsolidation of amygdala-dependent memories" 2013, **Current Biology**, 23, 467-472.
- Debiec et al. "The amygdala encodes specific sensory features of an aversive reinforcer" 2010, **Nature Neuroscience**, 13, 536-537

Valérie DOYERE (DR CNRS) is the head of the "Cognitive & Network Neuroscience" department & the "Memory, Emotion & Time" research team at the **Paris-Saclay Institute of Neuroscience** (NeuroPSI).



Contact : u1253@univ-tours.fr