

**MASTER 2 Neurosciences Fondamentales et Cliniques****Internship proposal 2021-2022**

*(internship from January to end of May 2022)*

**Host laboratory:**

Centre de Recherche en Neurosciences de Lyon  
Centre Hospitalier Le Vinatier - Batiment 462 - Neurocampus  
95, boulevard Pinel - 69675 Bron Cedex

**Host team :** MEMO team - <https://www.memoteam.org/>

**Internship supervisors :**

Dezso Nemeth – Head of the team, research director – [nemethd@gmail.com](mailto:nemethd@gmail.com)

**Project title :** Cognitive and Behavioral bases of the Implicit Learning and memory rewiring

**Project summary :**

We explore the entire process of implicit learning from memory formation to consolidation and investigate how this process is affected by different factors such as age, sleep, stimulus modality, as well as various disorders (schizophrenia, epilepsy).

We do so by using diverse neuroscience methods, which include Electroencephalography (EEG) and Transcranial Magnetic Stimulation (TMS).

The studies performed within our team could lead us not only to a deeper understanding of this fundamental learning mechanism but also to discover how humans rewire their skills and how it may be possible to boost habit change in general.

The trainee will be an integral part of the team by performing the experiments on the subjects, i.e., administering the eeg and the TMS, taking neuropsychological tests, collecting data, analyzing data...

**3-5 recent publications :**

Nemeth, D., Janacsek, K., Polner, B., & Kovacs, Z. A. (2013). Boosting human learning by hypnosis. *Cerebral cortex*, 23(4), 801-805.

Kóbor, A., Janacsek, K., Takács, Á., & Nemeth, D. (2017). Statistical learning leads to persistent memory : Evidence for one-year consolidation. *Scientific Reports*, 7(1).

Simor, P., Zavecz, Z., Horvath, K., Éltető, N., Török, C., Pesthy, O., ... & Nemeth, D. (2019). Deconstructing procedural memory: Different learning trajectories and consolidation of sequence and statistical learning. *Frontiers in psychology*, 9, 2708.

Kiss, Nemeth, & Janacsek (2019). Stimulus presentation rates affect performance but not the acquired knowledge—Evidence from procedural learning. *BioRxiv*.

Please send your proposal to [emiliano.macaluso@univ-lyon1.fr](mailto:emiliano.macaluso@univ-lyon1.fr) and [marion.richard@univ-lyon1.fr](mailto:marion.richard@univ-lyon1.fr) for publication on the Master of Neuroscience website.