INSTITUT DE GÉNOMIQUE FONCTIONNELLE

CNRS UMR5203 - Inserm U1191- Montpellier Université d'excellence

PhD student position in neuroscience: neural bases of appetitive and aversive memories

A PhD position is open in the team "Molecular and Neural Coding of Behavior" to work with Stephanie Trouche (https://orcid.org/0000-0003-1708-8435; https://www.researchgate.net/profile/Stephanie_Trouche2) at the Department of Neuroscience, Institute of Functional Genomics, CNRS, INSERM, University of Montpellier, France (https://www.igf.cnrs.fr/en/). Our research aims to study the neural circuit and mechanisms of appetitive and aversive memories in mice by combining electrophysiological, anatomical, behavioral (learning and memory tasks) and genetics-based techniques. The project involves stereotaxic surgeries, image acquisition/analysis, in vivo electrophysiology, optogenetics and data analysis.

Profile: the candidate must have a background in Neuroscience, Cognitive Science or Engineering, and experience in rodent behavior. Hands-on experience in intra-cranial surgeries, electrophysiological recordings and data analysis (Python/Matlab) would be a plus. The applicant is expected to have very good verbal/written communication skills in English and a critical approach to scientific literature.

Funding: This position is for 3 years (ANR JCJC DYNAFEAR, PI: Stephanie Trouche), starting from Fall 2020 or early 2021.

Applications including a 1-page cover letter, CV, a detailed statement of skills and contact details for two-three referees, should be sent to stephanie.trouche@igf.cnrs.fr Deadline for application is August 15th 2020.

Selection of 5 publications of the supervisor:

Trouche S, Koren V, Doig NM, Ellender TJ, El-Gaby M, Lopes-dos-Santos V, Reeve HM, Perestenko PV, Garas FN, Magill PJ, Sharott A and Dupret D. A hippocampus-accumbens tripartite neuronal motif guides appetitive memory in space. **Cell,** 2019 Mar 7;176(6):1393-1406.e16.

van de Ven GM, Trouche S, McNamara CG, Allen K, Dupret D. Hippocampal offline reactivation consolidates recently formed cell assembly patterns during sharp wave-ripples. **Neuron**, 2016 Dec 7;92(5):968-974.

Trouche S, Perestenko PV, van de Ven GM, Bratley CB, McNamara CG, Campo-Urriza N, Black SL, Reijmers LG, Dupret D. Recoding a cocaine-place memory engram to a neutral engram in the hippocampus. **Nature Neuroscience**, 2016 Apr;19(4):564-7.

McNamara CG, Tejero-Cantero A, Trouche S, Campo-Urriza N, Dupret D. Dopaminergic neurons promote hippocampal reactivation and spatial memory persistence. **Nature Neuroscience**, 2014 Dec 17(12):1658-60.

Trouche S, Sasaki J, Tu T, Reijmers LG. Fear extinction causes target specific remodeling of basal amygdala perisomatic synapses. **Neuron**, 2013 Nov20;80(4):1054-65.