



The Functional Brain Mapping  
Lab

***Master project in 2019-2020 in the functional brain imaging lab:  
animal electrophysiology***

Applications are invited for Master thesis projects in the functional brain mapping laboratory working in behavioral and systems neurosciences in the Basic Neuroscience Department. All brain functions rely on the interactions between distributed cortical regions forming dynamic large-scale networks. Our lab focus on studying those large-scale brain networks functions and dysfunctions in humans and animals. In particular, two different Master projects are proposed. One project concerns the study of the development of large-scale epileptic networks in a mouse model of focal epilepsy, a crucial phenomenon that may explained recurrence of seizures despite surgical resection of the focus in patients. The other project aims to study the mechanisms of auditory sensory adaptation, a fundamental property of the brain for sensory processing and sensory prediction. This fundamental property is impaired in psychiatric diseases such as schizophrenia; however, its mechanisms are still unknown. For these projects, students will have the chance to be involved in surface and intra-cortical electrophysiological recordings and the analysis of the resulting data. The functional brain mapping lab is a big group of researchers based in the CMU and in the Campus Biotech at Sécheron and the successful candidates will have the opportunity to interact with other members of the lab and take part in regular weekly lab meetings. Candidates studying biology, psychology and medicine as well as those studying engineering or physics are encouraged to apply.

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