

PhD student position in Systems Neuroscience

Neuronal circuits for emotional memories

The cerebral cortex endows us with the ability to perform complex cognitive and emotional processes supporting adaptive behaviour. The ventral hippocampus is a cortical brain region involved in the genesis of anxiety responses, context-dependent fear and reward behaviours. We have recently identified selective neuronal correlates for anxiety and fear in ventral hippocampal circuits (Ciocchi et al., 2015, *Science*; Whittle et al., *Nat. Comm.*, 2021). The PhD project will address the neuronal basis of context-specific emotional memories by recording from- and interfering with- identified neuronal cell-types of the ventral hippocampus.

The PhD project relies on an innovative cross-level approach combining single-unit recordings and/or Ca²⁺ imaging of genetically identified neurons, selective optogenetic strategies, cell-type specific viral tracing and behavioural paradigms in mice.

We are seeking for a highly motivated candidate with a Master in Neuroscience-related disciplines (Biology, Engineering, Medicine) and with a strong interest in the neuronal circuits underlying emotional memories. Candidates with advanced programming skills in data analysis and signal processing are strongly encouraged to apply. Candidates must be proficient in English.

The PhD student will be hosted by lab of Stéphane Ciocchi at the Department of Physiology of the University of Bern.

How to apply:

Please send a CV, a cover letter with a brief statement of career goals and the name of 1-2 referees to: stephane.ciocchi@unibe.ch. Candidates will be evaluated starting in Spring 2022 and until the position is filled. Only short-listed candidates will be further contacted. The PhD student is expected to start in June 2022 but not later than September 2022. For further information, please contact Stéphane Ciocchi.

References:

Whittle, Fadok, MacPherson, Nguyen, Botta, Wolff, Müller, Herry, Tovote, Holmes, Singewald, Lüthi & Ciocchi
Central amygdala micro-circuits mediate fear extinction. *Nat Commun.* 2021 Jul 6;12(1):4156.

Ciocchi., Passecker, Malagon-Vina, Mikus and Klausberger, T.
Selective information routing by ventral hippocampal CA1 projection neurons. *Science* 348, 560 (2015).