Laboratory title  :  CNRS UMR 5287 - Jean-René Cazalets

Supervisor

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Thesis title :

Interactions between motor neural networks in the neonatal rat

Keywords :  locomotion, respiration, electrophysiology, neural networks

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Abstract

This project combines electrophysiological and pharmacological approaches to understand how neural networks interact in order to adapt the respiratory activity during locomotion in mammals. This study will take a general approach that utilizes various spontaneous and evoked perturbations in respiration/locomotion coordination (including electrical stimulation of sensory afferents and pharmacological manipulations of neural networks) as probes to understand interactions between locomotor and respiratory neural networks. It is proposed that analysis of the influences of these perturbations on the modulation of locomotor and respiratory rhythms and their coupling, will provide important insights on the interaction between locomotor and respiratory functions.

Qualification required

No particular prerequisite is required. The Candidate has to show strong intellectual curiosity for the study of neural networks and in neurosciences...