INSTITUT PARIS DESCARTES NEUROSCIENCES COGNITION

FÉDÉRATION DE RECHERCHE EN NEUROSCIENCES

Neuroscience Seminar Series

Friday, May 27th, 2016 at 11:30

Salle des Conférences (R229)

Centre Universitaire des Saints-Pères

45 rue des Saints-Pères, 75006 Paris

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Specific synaptic processing in cerebellar modules

Neuronal networks are often organized in local circuits or modules that serve different functions in specific brain regions. A given cortical area is composed of many functional modules that allow a parallel processing of incoming information. One major challenge is to unravel the operational modes of these modules. The cerebellum plays a major role in the control and learning of skilled movements. To understand the integrative role of the cerebellum in the motor circuit its input/output transformation needs to be elucidated. Although the cellular organization of the cerebellar cortex looks homogeneous across lobules and folia, anatomical and molecular data have shown that the cerebellum is also organized in modules. Functional studies have demonstrated that task-related modules can be identified and selectively modified. However rules governing how incoming information is channeled through cerebellar modules and how the specific processing of one given input is carried out by the microcircuits are still poorly understood. Furthermore, the functional synaptic connectivity within and across individual modules has not yet been characterized. I will present our recent findings that can shed light on the modular organization of synaptic integration properties in the cerebellar cortex.

Those interested in meeting with the speaker please contact

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Les Sciences de l'Homme et de la Santé