



第91回 創薬科学セミナー (先端創薬科学特論 単位認定)

研究大学強化促進事業 若手新分野創成研究ユニット・フロンティア

The cerebellum and arousal (小脳と覚醒)

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日時：2018年12月10日 (月) 15時-16時30分

場所：創薬科学研究館 2階 講義室 (205)

Damage to the cerebellum impairs coordination of movements in many cases, which is so conspicuous that the cerebellum has been regarded as a part of motor system for centuries. Recent studies, however, suggest that the cerebellum is more than a motor coordinator. Cognitive and affective functions are impaired in patients with lesions involving the posterior lobe and the vermis of the cerebellum. Multiple major psychiatric disorders such as autism and schizophrenia are also associated with abnormal size or activities of these portions of the cerebellum. However, in spite of the accumulating implications from functional imaging and clinical studies, it has been poorly understood HOW the cerebellum engages non-motor functions. To tackle the question, we combined neural tracing, optogenetic manipulation, electrophysiology, and behavioral assays in mice, and revealed that the posterior vermis of the cerebellum directly connects with the arousal system widely distributing from the thalamus to the brainstem, powerfully initiating startle and arousal responses. In the seminar, quick overviews of cerebellar research, the arousal system, and experiment techniques will be also presented for graduate students. (セミナーは日本語で行います。)

Host: 小坂田文隆 (ext. 6814)