

大学院特別講義のご案内

◆ 日時: 2013年5月28日(火) 17:00~18:00

◆ 場所: F棟4階 大学院セミナー室

◆ 講師: Dr. Soojung Lee, DMD, PhD

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◆ 演題: Microcircuit oscillations in cerebellum/thalamus

◆ 要旨: Brains neuronal assemblies are temporally organized and generate oscillations embedded with temporal information from outside and inside of brain. Collective neuronal behaviors and behavioral correlates can be established through synchrony. In cerebellum, granule cell conductance changes by tonic GABA inhibition can generate theta oscillations and control problems for continuous movements. Gamma oscillations of molecular layer interneuron assemblies have also been reported although functional consequences are yet known.

By utilizing electrophysiological and molecular techniques, we elucidated the source of tonic GABA for granule cell inhibition, Best1 channel from glia in cerebellum. We also tried to examine spatial and temporal organizations of molecular layer interneurons using ontogenetic techniques, which can be functionally important for Purkinje cell outputs. In thalamus, reticular thalamic neurons and thalamocortical neurons, together with corticothalamic neurons constitute microcircuits for sleep spindle generation. Sleep spindles and spike wave discharges are thought to originate from the same thalamic pacemaker, thus share common pathways. I'd like to explore some of similarities for these conditions and NREM arousal parasomnias.

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