新潟脳神経研究会特別例会の御案内

日 時:<u>平成27年6月17日(水)17:00~</u> 場 所:**脳研究所 1F 検討会室**

Overlapping Mechanisms of Neuronal Injury and Oncogenesis

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Synaptic remodeling mediates the formation of memories in the form of brain circuitry. As an interesting concept, the underlying molecular mechanisms of synaptic plasticity such as posttranslational modifications may be considered special adaptations of cell cycle machinery. Dysregulation of these mechanisms or loss of homeostasis results in neuropathology that develops either acutely or over chronic periods. Common examples are ischemic stroke, traumatic brain injury, and Alzheimer's disease. Blocking the critical pathways mediating neuronal injury is neuroprotective, and a strategy for reducing neuronal injury in the clinic. While induction of these injury pathways in the brain leads to neuronal death, in other cells such as those of the neuroendocrine system, activation of these pathways results in cancer. Examples include pancreatic, adrenal, thyroid, pituitary, pulmonary, and GI tract neuroendocrine cancers. We are learning a great deal about neoplastic mechanisms by studying brain injury and, in turn, gaining new perspectives about brain injury by studying neuroendocrine cancer. New pre-clinical data demonstrating this intriguing overlap and the study of both brain and cancer pathology together with other approaches and new technology will be presented. We will demonstrate the combined use of biochemistry, pharmacology, neurophysiology, pathology, behavior, advanced transgenics, in vivo imaging, and whole organ 3D imaging technology to gain better understanding of the mechanistic basis for both brain injury and neuroendocrine cancer. The goal of this presentation is to share these results and exchange ideas about how this information may allow us to bring new approaches to the clinic to treat neurological and cancer-related disease.

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