



CDB SEMINAR

Speaker: Hideyuki Okano
<Department of Physiology, Keio University School of Medicine>

Title: "Self-renewal of neural stem cells and CNS-repair"

Date: Wednesday, August 6
Time: 3:00 P.M. ~4:00P.M.
Place: 7th floor Conference Room, CDB

Summary:

Neural stem cells (NSCs) are multipotential progenitor cells that have self-renewal activities. A single NSC is capable of generating various kinds of cells within the central nervous system (CNS), including neurons, astrocytes, and oligodendrocytes at least in vitro, although its underlying mechanisms are only partially understood. However, because of these characteristics, there is increasing interest in NSCs and neural progenitor cells from the aspects of both basic developmental biology and therapeutic applications to the damaged brain. In this seminar, I will describe how our understanding the nature of the NSCs present in the CNS contribute to feasible strategies for manipulating cells in situ to treat the damaged brain. The topics in the talk include the extracellular factors and signal transduction cascades involved in the differentiation and maintenance of NSCs, the population dynamics and locations of NSCs in embryonic and adult brains, prospective identification and isolation of NSCs, and the induction of NSCs to adopt particular neuronal phenotypes.

Host Fumio Matsuzaki Cell Asymmetry, CDB

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