CDB SEMINAR

Speaker: **Yukiko Gotoh**

< Institute of Molecular and Cellular Biosciences, University of Tokyo>

Title: "Fate regulation of neural precursor cells in the developing mouse brain"

Date:	Friday, July 22
Time:	16:00 -17:00
Place:	7F Conference Room of Building A,CDB

Summary:

What determines the number of neurons in the mammalian brain? Since terminally-differentiated neurons do not proliferate, the initial number of neurons depends upon how many times their precursors divide. In the mammalian brain, neurons and glia are generated from common precursors called neural precursor cells (NPCs). It has been shown that the undifferentiated state of NPCs can be maintained by the Notch and FGF2 signaling. Notch signaling inhibits neuronal differentiation of NPCs by induction of Hes proteins, which antagonize proneural basic helix-loop-helix proteins. On the other hand, the mechanisms by which FGF2 maintains NPCs remained unclear. In this seminar, I will present data showing essential roles of the JAK-STAT pathway in the maintenance of NPCs in the presence of FGF2. I will also talk about the stage-dependent response of NPCs to various signals, and discuss how it may contribute to the regulation of the number of neurons.

Host: Shin-Ichi Nishikawa <Stem Cell Biology, CDB>

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