



CDB SEMINAR

Speaker:

Tetsuo Yamamori

<National Institute for Basic Biology, Division of Brain Biology>

Title: “Genes specifically expressed in primate visual and association areas: their implication for formation and evolution of the primate neocortex.”

Date: Tuesday, September 27

Time: 17:00~18:00

Place: 1F Auditorium of Building C, CDB

Summary

Since Korbinian Brodmann defined neocortical areas in the last early century, much has been studied about the anatomical structure and function. Yet, relatively little has been known about the formation, and there has been a long debate as to what extent area formation is determined by intrinsic genetic programs and environmental cues. Recent studies using mouse molecular genetical technology have revealed that the early neocortical formation is determined by signal molecules, transcriptional factors and attractant and repulsive molecules (Ephs/Epherins, etc) in genetically programmed manners. However, the fact that no gene has been yet found to be expressed in an area specific manner in rodents suggests that complex molecular interaction is involved in area formation. Since primates have more complex but distinct areas than those of other mammal, we have been taking an approach to identify the genes that are specifically expressed in primate neocortical areas and indeed found the genes specifically expressed in primate visual, motor and association areas. In this seminar, I will talk our recent studies on features of these genes, such as activity-dependency and primate-specificity. I will also discuss their implication on formation and evolution of the primate neocortex.

Host: Kohei, Hatta, <Vertebrate Body Plan, CDB>

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