

Frontier Bioscience Seminar at Osaka University, Suita Campus

Deciphering species-specific properties of human corticogenesis.

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Date: July 16 (Tue), 2019

Time: 16:30-18:00

Place: Seminar room (3rd floor) in Nanobiology building, Suita Campus

Abstract:

The human brain and most strikingly the cerebral cortex has undergone rapid expansion and increased complexity during recent hominid evolution.

One striking feature of human corticogenesis is that it is highly protracted in time, from early steps of expansion of progenitor pools and neurogenesis, to later stages of neuronal maturation and wiring.

This protracted timing is thought to contribute in an important fashion to several key features of the human brain, such as cortical size and complexity.

In vitro pluripotent stem cell-based models and in vivo mouse - human chimeric brain experiments indicate that the species-specific temporal patterning of key steps of corticogenesis is largely intrinsic to cortical progenitors and neurons.

The underlying molecular mechanisms start to be uncovered, and include species-specific transcriptional programmes and cellular properties.

Host ■ Nobuhiko Yamamoto, PhD

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