

ASHBi SEMINAR

Visualizing and manipulating nonhuman primate brain circuits and functions

Lecturer: **Dr. Takafumi Minamimoto**

Chief, Section on Systems and Neural Circuits
National Institutes for Quantum Science and Technology



Date

Friday, 23 December 2022

Time

16:00 – 17:00 [JST]

Venue

Hybrid*

*Register via the right QR code



Conference Room / Zoom online
B1F, Faculty of Medicine Bldg. B

Abstract

Non-human primates, especially macaque and marmoset monkeys are excellent models for elucidating highly organized brain function and behavior. However, the application of optogenetics or chemogenetics to monkeys is still limited, preventing a network-level understanding of the higher brain functions. We have been working on the application of a chemogenetic technology Designer Receptors Exclusively Activated by Designer Drugs (DREADDs) to non-human primates. DREADDs afford a means of reversibly and remotely controlling the activity of a neuronal population expressing designer receptors through delivery of their agonist. Combined with PET and MR imaging, DREADDs are now a powerful and attractive tool for non-human primate research to visualize and manipulate specific brain circuits and monitor induced network activity changes. I will summarize the current status and prospects of chemogenetic technology that links primate brain circuits and behavior and opens up possibilities for developing therapeutic applications.

Organizer : Graduate School of Medicine

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