

# ASHBi SEMINAR

## Multiple axes of dopamine-striatum systems

Lecturer: Mitsuko Watabe-Uchida Ph.D.

Research Fellow in the Center for Brain Science, Harvard University



Date Thursday, 18 July 2024

Time 16:00 – 17:00 [JST]

Venue Conference Room  
(B1F, Faculty of Medicine Bldg. B)



\*Register via the right QR code

### Abstract

Dopamine is well known to convey reward-related information. However, multiple studies found that dopamine neurons are activated by not only reward but also aversive events. By performing systematic anatomical examination, we found a unique subpopulation of dopamine neurons as an anatomical outlier. These dopamine neurons project to the tail of the striatum (TS), receive a distinct set of inputs, and signal threat-related information, rather than reward. We found that TS and TS-projecting dopamine neurons are critical for animals to avoid and cope with a potentially threatening stimulus. These findings revealed parallel dopamine-striatum systems to evaluate reward and threat, which may collaborate or compete each other to determine animal actions.

Organizer : Graduate School of Medicine Institute for the Advanced Study of Human Biology (WPI-ASHBi)

Contact: Prof. Tadashi Isa

[E-mail] isa.tadashi.7u@kyoto-u.ac.jp

