

ASHBi SEMINAR

Dynamic Pluripotent Stem Cell States and Their Applications

Lecturer: **Jun Wu**

PhD, Department of Molecular Biology
UT Southwestern Medical Center



Date Wednesday, 26 July 2023

Time 17:00 – 18:00 [JST]

Venue Conference Room
B1F, Faculty of Medicine Bldg. B

*Register via the right QR code



Abstract

Pluripotent stem cells (PSCs) have emerged as powerful tools for modeling developmental processes and diseases and opening up new vistas in regenerative medicine and reproductive biology. Our research has been at the forefront of establishing novel culture systems and methodologies that facilitate the generation of new PSCs, thereby empowering both fundamental and translational research. We have broadened the spectrum of pluripotency states by successfully isolating mouse PSCs that showcase unique molecular and phenotypic features corresponding to varying developmental stages. Furthermore, some of these specifically tailored culture conditions, originally developed for mice, have enabled us to produce PSCs from an array of other mammalian species, including humans, non-human primates, and ungulates. Additionally, I will delve into our latest advancements in using these PSCs for the creation of human embryo-like structures, as well as understanding and overcoming xenogeneic barriers to interspecies organogenesis, a field with the potential to address the critical global shortage of donor organs.

Organizer : Graduate School of Medicine

Institute for the Advanced Study of Human Biology (WPI-ASHBi)

Contact: Prof. Mitinori Saitou

[E-mail] saitou.mitinori.4m@kyoto-u.ac.jp

