BDR SEMINAR (Kobe & online hybrid)

Nobuhiko Hamazaki

University of Washington

Tuesday, March 10, 2026

10:00-11:00

1F Auditorium, DB Building C, Kobe / Broadcast online via Zoom

Zoom meeting URL will be announced on the event day by e-mail.

※Non-BDR members: Please register from the following link.

https://krs2.riken.jp/m/bdrseminarregistration (Registration deadline Mar 5)

Reconstructing and engineering the mammalian development in vitro

Summary

Disruptions to the post-gastrulation stage of human development can lead to severe pathologies, such as anencephaly and spina bifida. Despite the clinical significance of this stage, research is limited by the lack of access to human in vivo embryos. We address this challenge using human pluripotent stem cell (hPSC)-derived embryo models. Specifically, we have developed RA- and AP-gastruloids that successfully mimic many aspects of human embryogenesis in vitro. This presentation will highlight our recent progress in using these models to decode the regulatory logic of early human development and developmental diseases. I will also discuss the new field of "impossible biology", in which we can test things that cannot happen naturally in order to gain a deeper understanding of natural processes.

Host: Tomoya Kitajima

Laboratory for Chromosome Segregation

Contact: tomoya.kitajima@riken.jp