ASHBi SEMINAR

HD Video Recorder of the Cell

Lecturer: Nozomu Yachie Ph.D.

Associate Professor, School of Biomedical Engineering, The University of British Columbia



Abstract

The dynamic behaviors of cells during development, tumorigenesis, and other disorders remain largely unclear. Our lab is developing "DNA event recording" systems by which high-resolution information of cells is progressively stored in cell-embedded "DNA tapes." Using high-throughput single-cell sequencing, such a system enables access to molecular and cellular history information of cells at the time of observation and provides a way of observing the dynamics of complex biological systems in high resolution. We envision mapping the whole-body cell lineage and differentiation trajectories of mouse development and have been actively progressing towards this goal. I will share our grant vision and recent progresses in developing new genome editing tools and high-performance computing technologies.

Organizer : Graduate School of Medicine Institute for the Advanced Study of Human Biology (WPI-ASHBi) Contact: Prof. Masatsugu Ema [E-mail] mema@belle.shiga-med.ac.jp

