

ASHBi SEMINAR

Role of chromatin structure in determining the targets of regulatory elements

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Date Thursday, 5 December 2024

Time 10:00 – 11:00 [JST]

Venue Seminar Room **Onsite Only***

1F, Faculty of Medicine Bldg. B

Register here



Abstract

The three-dimensional (3D) structure of human chromatin plays a crucial role in determining cell behavior and function by impacting various biological processes such as transcription, DNA replication, recombination, and DNA damage repair. In my research, I combine Hi-C chromatin conformation data with CAGE transcriptome profiling data, a technique that detects and quantifies transcription initiation at single-nucleotide resolution, to tackle fundamental genomics and biomedical problems. This integration allows us to link enhancers with their corresponding promoters and to assign functions to non-coding RNAs based on their physical association with coding genes. Recently, I have applied my genomic expertise to understand the biomedical problems, including cellular responses to SARS-CoV-2 infection. Also, I will discuss results from an ongoing project where we use electron microscope tomography (EMT) imaging of the cell nucleus to understand genome function at the biophysical level in 3D genomics.

Organizer : Graduate School of Medicine
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