Chromatin is organized in a non-random fashion within 3D nuclear space. During developmental processes, the nuclear architecture is dramatically reconstructed, resulting in the establishment of cell-type specific nuclear organization. Defects in structural components of the nucleus are responsible for developmental aberrations and several human diseases. Remodeling of the nuclear architecture leads to spatial arrangement of genes, which could affect genome functions including gene expression. We aim to reveal the role of chromatin dynamics in cell lineage-allocation by deciphering the molecular mechanisms underlying the remodeling of nuclear organization and their effects on developmental gene expression, using mouse early embryos and embryonic stem (ES) cells as model systems. In this seminar, I will present our recent studies to show you how we tackle our questions.

Kurihara M. et al, Molecular Cell, 2020

This seminar will be held in English.
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