

## セミナーのお知らせ

# Imaging How Cells Choose their Fate, Shape and Position in the Mammalian Embryo

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**生命機能研究科 生命システム棟 2階セミナー室**

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Preimplantation development has typically been studied using fixed specimens. To reveal the real-time dynamics that form the embryo, we established advanced imaging technologies, to visualize cell behaviors and molecular events in real time within the mouse embryo. With this approach, we discovered how transcription factors bind to DNA in single cells to regulate the first cell differentiation during development. We also found new forms of actin and microtubule organization that control how the cells of the embryo become polarized during compaction, how they interact with each other to establish the first forms of tissue architecture, and how they specify the pluripotent and trophectoderm lineages. Together, our findings reveal new mechanisms controlling how the mammalian embryo forms and grows.

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