新学術創成研究機構

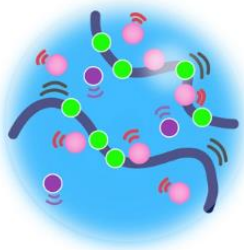
ナノマテリアル研究所

異分野融合セミナー
Interdisciplinary Research Seminar

Phase separation and transition of nucleolar condensate
核小体サブコンパートメントの相分離と相転移

Asst. Prof. Satoru Ide

National Institute of Genetics



The nucleolus is a nuclear body for ribosome biogenesis with multiphase liquid-droplets in three layers. How the liquid-liquid phase separation (LLPS) contributes to the function remains unclear. We are tackling this question by identifying the nucleolar components comprehensively, monitoring the molecular behaviors by single-molecule imaging in a living cell, analyzing the molecular localization patterning by a machine-learning algorithm, and reconstituting a nucleolar subcompartment in vitro. Our multi-faceted approach to characterize and define the nucleolus will highlight the LLPS-driven mechanisms of ribosome biogenesis and the ribosome dysfunction connected to human disorders called ribosomopathies.

References: S. Ide, et al., ***BioEssays***, 2022; S. Ide., et al., ***Science Advances***, 2020; S. Ide and J. Dejardin, ***Nature Communications***, 2015; S. Ide., et al., ***Science***, 2010.

Time and Date: **15:00** – 16:00 Friday, **November 18**, 2022

Venue: **Lecture Room 203, 2F Natural Science and Technology**

(自然科学本館・2階・203講義室)

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