

Curiosity-Driven Research: Constructing and deconstructing RNA granules

日程：7月23日（火）13：00-14：00

会場：教育研修棟 ユニバーサルホール 1

演者：Professor Takanari Inoue, Ph.D.,

Professor of Cell Biology;

Director Center for Cell Dynamics

Johns Hopkins School of Medicine



The function of proteins and nucleic acids within a cell is determined by their primary sequence. Recent work, however, has shown that within living cells the role of many proteins and RNA molecules can be influenced by the physical state in which the molecule is found. More specifically, proteins and RNA molecules can undergo condensation to form non-membrane-bound structures collectively known as RNA granules. Based on chemical and optical genetics schemes, our group recently developed two distinct molecular techniques to either construct or deconstruct RNA granules including stress granules and pathological condensates related to neurodegenerative diseases. I will introduce how we designed, developed and implemented such techniques, and share biological insights obtained from the unique probing of these redefined subcellular organizations.

2023 – Director, Graduate Program of Biochemistry, Cellular and Molecular Biology

2019 – Director, Center for Cell Dynamics, Johns Hopkins University

2018 – Professor, Cell Biology, Cell Dynamics, Pharmacology and Molecular Sciences, Biological Chemistry, and Biomedical Engineering, Johns Hopkins University

2008 – Assistant/Associate Professor of Cell Biology and Cell Dynamics, Johns Hopkins University

2003 – Postdoctoral Fellow, Chemical & Systems Biology, Bio-X Program, Stanford University

1998 – 2003 Graduate Student, Chemical & Cell Biology, University of Tokyo (Tokyo, Japan)