Workshop on Biomolecular Design and Simulations

Thursday, 26 November 2026
12:25–18:00
IPR Auditorium, The University of Osaka

INSTITUTE for PROTEIN RESEARCH
THE UNIVERSITY OF OSAKA

ASPIRE
Adopting Sustainable Partnerships for Innovative Research Ecosystem

BioEngAGE

ASPiRE
Advanced Data Science Center for Protein Research

12:25–12:30 Opening

Session 1 Molecular Design 1

12:30–13:00 **Richard Bayliss**
Designing Proteins to Control Cell Signalling

13:00–13:30 **Junichi Takagi**
Acquisition of novel functions by loop-grafting; no AI required!

13:30–14:00 **Nobuyasu Koga**
Design of Functional Proteins using Readymade Scaffolds

14:00–14:20 Break

Session 2 Molecular Design 2

14:20–14:50 **Yohei Yokobayashi**
Designing RNAs that function in test tubes and living cells

14:50–15:20 **Shunsuke Tagami**
Reconstruction of a minimal RNA polymerase

15:20–15:50 **Hirohide Saito**
Engineering RNA to Program Cellular Functions and Cell Fate

15:50–16:10 Break

Session 3 AI-based Simulation

16:10–16:40 **Akira Shinohara**
AlphaFold3-based prediction of intermediates in DNA exchange reaction: Toward the redesign of a new recombinase

16:40–17:10 **Mariko Okada**
Bridging Molecular and Cellular Simulations to Control Cell Fate

17:10–17:15 Break

17:15–17:55 **Discussion**

17:55–18:00 Closing

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