

Smart Condensates and Droplets Symposium 2024

Thursday 5 September 2024

10:00 AM - 10:30 AM	Registration and Arrival Refreshments
10:30 AM - 10:45 AM	Welcome: Lorenzo Di Michele
10:45 AM - 11:30 AM	Keynote Speaker: Masahiro Takinoue Nucleic-acid-based Liquid-like Condensates for Smart Artificial Cells
11:30 AM - 12:15 PM	Keynote Speaker: Andreas Walter Artificial Cells Built by Phase Separation of Long ssDNA
12:15 PM - 1:15 PM	Lunch Room: Hall
1:15 PM - 2:00 PM	Contributed Talks: David Fairhurst (1:15 PM – 1:35 PM) Lessons learned from Ouzo: initiation and arrest of liquid-liquid phase separation Tim Nott (1:35 PM – 1:55 PM) Modulating synthetic condensates with charge and ions
2:00 PM - 2:45 PM	Contributed Talks: Sam Wilken (2:00 PM – 2:20 PM) Spatial Organization of DNA Liquids Rebecca Beveridge (2:20 PM – 2:40 PM) Ion mobility mass spectrometry unveils global protein conformations in response to conditions that promote and reverse liquid-liquid phase separation
2:45 PM - 3:30 PM	Afternoon Break and Poster Session
3:30 PM - 4:15 PM	Contributed Talks: Andrey Romanyuk (3:30 PM – 3:50 PM) Electrostatic patches drive LLPS of folded de novo proteins in mammalian cells Tiemei Lu (3:50 PM – 4:10 PM) Controlling Multiphase Coacervates Wetting and Self-organisation
4:15 PM - 5:00 PM	Keynote Speaker: Hirohide Saito RNA and RNP synthetic biology to program cells
5:00 PM - 5:45 PM	Keynote Speaker: Elisa Franco Programmable artificial RNA condensates in mammalian cells
7:00 PM - 10:00 PM	Conference Dinner Room: Library

Friday 6 September 2024

8:30 AM - 9:00 AM	Arrival Refreshments
9:00 AM - 9:45 AM	Keynote Speaker: Chiu Fan Lee The synaptonemal complex assembles between meiotic chromosomes by wetting
9:45 AM - 10:30 AM	Keynote Speaker: Rosana Collepardo Physicochemical regulation of the liquid-like organisation of chromatin
10:30 AM - 11:00 AM	Morning Break
11:00 AM - 11:45 AM	Contributed Speakers: Stefano Bo (11:00 AM – 11:20 AM) Single-molecule trajectories in chemically active condensates: systematic drift and enhanced diffusion Luke Kristopher Davis (11:20 AM – 11:40 AM) Emergence of mesoscopic heterogeneity from sequence patterning in biomolecular condensates
11:45 AM - 12:10 PM	Contributed Speakers: Janet Kumita (11:45 AM – 12:10 PM) Tandem-repeat proteins introduce tuneable properties to engineered biomolecular condensates
12:15 PM - 1:15 PM	Lunch Room: Hall
1:15 PM - 2:00 PM	Keynote Speaker: Mark Leake Bacterial LLPS droplets protect mRNA during stress
2:00 PM - 2:45 PM	Contributed Talks: Karina Pombo-Garcia (2:00 PM – 2:20 PM) Wetting of junctional condensates along the apical interface promotes tight junction belt formation Paul Beales (2:20 PM – 2:40 PM) The role of confinement and membrane transport in regulating non-linear enzyme kinetics in a vesicle compartment
2:45 PM - 3:45 PM	Afternoon Break and Poster Session
3:45 PM - 4:30 PM	Keynote Speaker: Gabi Kaminski Intracellular FUS protein condensation leads to cytoskeletal, organelle and cellular homeostasis perturbations and to early signs of cellular senescence
4:30 PM - 5:15 PM	Keynote Speaker: Tuomas Knowles Protein phase transitions
5:15 PM - 5:30 PM	Poster Awards and Closing Remarks