

**NANYANG
TECHNOLOGICAL
UNIVERSITY
SINGAPORE**

School of Biological Sciences
College of Science

SINGAPORE BIOSCIENCE SYMPOSIUM

Supported by IAS Frontiers Conference Series

**20
25**

**10 - 12 DECEMBER 2025
SCHOOL OF BIOLOGICAL SCIENCES,
NTU SINGAPORE**

SYMPORIUM PROGRAMME BOOK



<https://bit.ly/2025-SBS>

CHAIR'S MESSAGE



Dear friends and colleagues,

It gives me great pleasure to welcome you to the Singapore Bioscience Symposium 2025, hosted by the School of Biological Sciences (SBS) at Nanyang Technological University (NTU). This inaugural symposium represents more than an academic gathering, and it reflects our School's vision to position Singapore as a regional hub for transformative research and education in the life sciences.

At SBS, our work is anchored around three strategic research pillars: Plant and Agrobiology; Structural and Cell Biology; and Disease, Development, and Target Discovery. These pillars embody our belief that fundamental discovery and applied translation are deeply interconnected. Whether through understanding the molecular machinery of cells, engineering plant resilience, or unveiling disease mechanisms, each pillar contributes to a unified goal: advancing bioscience for human and planetary well-being.

The Singapore Bioscience Symposium was conceived to bring this integrative spirit to life. By convening leading scientists, early-career researchers, and industry innovators, we aim to catalyse cross-disciplinary exchange and collaboration. This year's focus on the dynamic organisation of life through biomolecular condensates and cellular self-organisation exemplifies how SBS research converges across scales, from molecules to ecosystems, to reveal the principles underlying biological complexity.

This event also underscores our School's broader mission: to foster a vibrant, globally connected research ecosystem that drives innovation in health, sustainability, and biotechnology. We are immensely grateful to our speakers, partners, and participants for joining us in this collective endeavour.

I wish everyone an inspiring symposium that will promise new collaborations and ideas that shape the next chapter of biological discovery here at NTU and beyond.

Professor Kanaga Sabapathy

Chair, School of Biological Sciences
Nanyang Technological University, Singapore

ORGANISING COMMITTEE CHAIRS' MESSAGE



Dear friends and colleagues,

In the past two decades, the scientific framework of cell biology and biochemistry was expanded by the realisation that during evolution, the macromolecules of life had taken advantage of the possibilities offered by phase transitions. Multivalent interactions between one or more protein and/or nucleic acid components drive the formation of liquid droplets that enable exquisite spatiotemporal orchestration of the diverse events taking place in the cell. The disproportionate involvement of intrinsically disordered regions of proteins as both "spacers" and "stickers" in these processes generated powerful and tractable hypotheses to guide the experimental exploration of what was previously regarded the dark matter of biochemistry. Soon a large proportion of scientists interested in the molecular basis of life realised that this phenomenon of liquid-liquid phase separation interfaced with their areas of interest.

Despite the vast diversity of biology, much of the nascent field of biomolecular condensates has remained intensely focussed on characterising early case studies, such as the nucleolus and stress granules. In Singapore, particularly at NTU's School of Biological Sciences, the study of biomolecular condensates followed a different, somewhat greener, route. At the Plant and Agrobiology Research Pillar, we have explored the role of phase separation in the enhancement of photosynthesis and plant defence responses during diverse biotic- and abiotic- signalling.

At this inaugural Singapore Bioscience Symposium, we are extremely proud to have been able to assemble the international leadership of scientists that share our vision of pushing forward the frontiers of this burgeoning field. At the same time, we are excited to showcase the very best local research. It is our hope that this meeting of minds will generate interactions and ideas that will shape the field for years to come. Please enjoy!

Yansong Miao and Oliver Mueller-Cajar

Co-Chairs, Plant Biomolecular Condensation and Signalling
Nanyang Technological University, Singapore

PLENARY SPEAKERS



Ji-Jie Chai, Westlake University

Ji-Jie Chai earned his Ph.D. in analytical chemistry from Peking Union Medical University in 1997. After postdoctoral research at Princeton University, he joined the National Institute of Biological Sciences (NIBS), Beijing, in 2004. From 2017 to 2023, he was an Alexander von Humboldt Professor at the University of Cologne and the Max Planck Institute for Plant Breeding Research, Germany. In 2023, he became a Chair Professor at Westlake University. As a structural biologist and biochemist, his research centres on plant receptor-like kinases (RLKs) and NOD-like receptors (NLRs), elucidating their structural and biochemical mechanisms in ligand recognition and activation. He received the 2023 Future Science Prize in Life sciences "for the discovery of resistosomes and elucidation of their molecular structures and functions in plant immune response against pathogens".



Lucia Strader, Salk Institute

Lucia Strader is the Howard H. and Maryam R. Newman Chair in Plant Biology at the Salk Institute for Biological Studies. Her research program focuses on how plants integrate environmental cues to drive plant growth and development, with two major foci: the plant hormone auxin and gene transcription. Auxin - a critical plant hormone - controls both cell division and cell expansion to orchestrate developmental events and environmental response. Understanding the molecular details of how auxin 'works' has revealed strategies plants use to alter growth in response to environmental stimuli.

KEYNOTE SPEAKERS



José R. Dinneny, Stanford University

José Dinneny received his B.S. degree from UC Berkeley and Ph.D. from UC San Diego, followed by postdoctoral research at Duke University mapping tissue-specific stress responses. He launched his independent lab in Singapore at Temasek Lifesciences Laboratory before moving to the Carnegie Institution and then to Stanford University in 2018, where he is now a professor of Biology. His honors include major fellowships from HHMI, AAAS, the National Research Foundation of Singapore, and the Chan Zuckerberg Biohub, as well as Science News' SN10 recognition and the Charles Albert Shull Award. In 2024, he became an HHMI Investigator.



Xuemei Chen, Peking University

Xuemei Chen received her B.S. degree in biology from Peking University, China and a doctorate in biochemistry from Cornell University, USA. After postdoctoral training at California Institute of Technology, she started her assistant professor position in 1999 at Rutgers University. She moved to University of California, Riverside in 2005 as an associate professor and was promoted to full professor in 2009 and distinguished professor in 2013. From Feb 2023, she has been Chair Professor and Dean at the School of Life Sciences, Peking University. Her work is focused on plant development, small RNAs, and RNA modifications.



Jiří Friml, Institute of Science and Technology Austria

Jiří Friml studied chemistry in Brno, Czechia, earning a Ph.D. in Biochemistry (2002) and a Ph.D. in Biology (2000) from the University of Köln, Germany. He is currently a Full Professor at the Institute of Science and Technology Austria (ISTA) and has made seminal contributions to fields of phytohormone transport and signalling, endocytosis, cell polarity, and the role of second messengers in plants. Author of about 380 papers in international journals, he is among the world's most cited plant biologists. His research has been recognized with numerous international awards, including the Körber European Science Award, the EMBO Gold Medal, and the Wittgenstein Award.

KEYNOTE SPEAKERS



Sheng Yang He, Duke University

Sheng Yang He is Benjamin E. Powell Distinguished Professor at Duke University and an Investigator at Howard Hughes Medical Institute. Research from his lab has led to foundational insights into plant-microbe interactions, including plant immunity, bacterial virulence, jasmonate signaling, stomatal defense and how climate conditions influence disease development and how plants control microbiota homeostasis for health. Sheng Yang received his bachelor's and master's degrees from Zhejiang University (Agricultural Campus), China, and a Ph.D. degree from Cornell University, USA. He is a fellow of the AAAS, a Thomson Reuters Highly Cited Researcher, a member of the US National Academy of Sciences, an editorial board member of Current Biology and PNAS, and a Past-President of the International Society of Molecular Plant-Microbe Interactions.



Amy Gladfelter, Duke University

Amy Gladfelter is a quantitative cell biologist investigating how biomolecular condensates organize the cytoplasm of large syncytial cells. She is a Distinguished Duke Health Science and Technology Professor in the Departments of Cell Biology and Biomedical Engineering at Duke University and a longstanding fellow of the Marine Biological Laboratory, where she directs the Physiology Course. Her research integrates microscopy, biophysical, and genetic approaches in fungi and human placenta. Gladfelter trained at Princeton University, Duke University, and the Biozentrum of the University of Basel, and is an elected fellow of the AAAS, the American Academy of Microbiology, and the American Academy of Arts and Sciences.

KEYNOTE SPEAKERS



Hong Zhang, Chinese Academy of Sciences

Hong Zhang is an Investigator at the Institute of Biophysics, Chinese Academy of Sciences. His laboratory pioneered the use of *C. elegans* as a genetic model to identify a group of metazoan-specific autophagy genes, known as Epg genes. Further work from his team demonstrated that these Epg genes act at steps unique to the autophagy pathway in multicellular organisms. Currently, his research focuses on the role of dynamic Ca^{2+} signaling in various aspects of autophagy. Hong Zhang serves as an Associate Editor for Autophagy and a Senior Academic Editor for the Journal of Cell Biology. He is also a member of the Editorial Boards of Developmental Cell, Cell Chemical Biology, Trends in Biochemical Sciences, and EMBO Reports.



Atul N. Parikh, Nanyang Technological University, and University of California, Davis

Atul N. Parikh is a Professor in the School of Materials Science & Engineering at Nanyang Technological University, Singapore, and in the Department of Biomedical Engineering at the University of California, Davis. Since 2025, he also serves as Co-Director of the Institute for Digital Molecular Analytics & Science (IDMxS). He earned his B. Chem. Eng. (1987) from the University of Bombay, and his Ph.D. in Polymer Science (1994) from the Pennsylvania State University. From 1996 to 2001, he worked in the Bioscience Division at Los Alamos National Laboratory (LANL). His research interests include soft matter, membrane biophysics, molecular analytics, biosensing, and synthetic cells.

INVITED SPEAKERS



Yiliang Ding, John Innes Centre

Professor Yiliang Ding FRSB is a group leader at the John Innes Centre (JIC), where she has led a research programme on RNA structure and function in living cells since 2014. She is also an Honorary Group Leader at the Babraham Institute and Honorary Professor at the University of East Anglia. After completing her bachelor's degree at Shanghai Jiao Tong University and Ph.D. at JIC, she pursued postdoctoral work at Penn State University. Her pioneering RNA structure-profiling technologies have transformed understanding of RNA regulation. She has received numerous awards, including three ERC grants, a Royal Society Faraday Fellowship, and the 2024 Blavatnik Award in Life Sciences.



Lisha Shen, Temasek Life Sciences Laboratory

Lisha Shen is a Principal Investigator at the Temasek Life Sciences Laboratory (TLL) and an Adjunct Assistant Professor at the National University of Singapore (NUS). She received her bachelor's degree from Shanghai Jiao Tong University in 2006 and her Ph.D. from NUS in 2010. She joined TLL as a Research Fellow in 2011 and established her independent research group in 2018. Her research focuses on the mechanistic and functional roles of RNA modifications and RNA-binding proteins in regulating RNA metabolism, plant development, and plant responses to environmental stress.



Oliver Mueller-Cajar, Nanyang Technological University

Oliver Mueller-Cajar is an Associate Professor at the School of Biological Sciences at Nanyang Technological University. The research group uses biochemistry, cell biology and genetic approaches to understand how photosynthetic organisms enhance their capacities to assimilate carbon dioxide. The work is relevant to understanding strategies to alleviate the low energetic efficiency of photosynthesis. He serves as the Assistant Chair of Research at SBS and is a current National Research Foundation Investigator.

INVITED SPEAKERS



Panagiotis N. Moschou, University of Crete

Panagiotis (Panos) Moschou obtained his bachelor's degree from the National and Kapodistrian University of Athens and completed his master's and Ph.D. in Molecular Plant Biology at the University of Crete. After military service, he pursued postdoctoral research at the Swedish University of Agricultural Sciences, studying proteases in Norway spruce. He established his research group there in 2017 and was appointed Associate Professor of Molecular Plant Physiology at the University of Crete in 2018, later joining the Foundation for Research and Technology - Hellas. His work focuses on dynamic protein-RNA assemblies regulating plant development and stress responses. He is a recipient of an ERC Consolidator Grant.



Chih-Hang Wu, Institute of Plant and Microbial Biology, Academia Sinica

Chih-Hang Wu received his Ph.D. from the University of East Anglia, where he conducted his doctoral research with Dr. Sophien Kamoun at The Sainsbury Laboratory, Norwich. In 2020, he established his research group as an Assistant Research Fellow at the Institute of Plant and Microbial Biology, Academia Sinica, and was promoted to Associate Research Fellow in 2025. His research investigates the evolution, mechanisms, and cell biology of plant-microbe interactions and disease resistance. His laboratory focuses on the evolution and function of plant intracellular immune receptors, the mechanisms of cell death, and, more recently, the development of novel agrobacterial tools for plant transformation.



Jieshun Lin, National University of Singapore

Jieshun Lin received his Ph.D. from the Chinese Academy of Sciences in 2018 and completed postdoctoral training at Aarhus University, Denmark. He joined the National University of Singapore in 2025. His laboratory focuses on biological nitrogen fixation in legumes, integrating genetics, cell biology, transcriptomics, and biochemistry to uncover components and mechanisms that regulate nitrogen fixation under changing environmental conditions. In this talk, he will present how legumes modulate nitrogen fixation in response to soil nitrate availability.

INVITED SPEAKERS



Tolga Bozkurt, Imperial College London

Tolga Bozkurt is Professor of Host-Pathogen Interactions at Imperial College London, where he leads the Host-Pathogen Interactions Lab, founded in 2014. His research explores the molecular arms race between plants and microbes, using cell biology, biochemistry, genetics, and AI-based structure prediction. His group investigates how pathogen effectors hijack host processes, how autophagy and membrane trafficking are rewired, and how NLR immune receptors and organelles are mobilised during infection. By mapping interconnected layers of plant immunity, his work identifies strategies for durable disease resistance. He is also co-founder of Resurrect Bio and a Co-Investigator at the Bezos Centre for Sustainable Protein.



Julien Gronnier, Technical University of Munich

Julien Gronnier is a plant molecular biologist whose work focuses on membrane signaling and plant immunity. He obtained his Ph.D. from the Laboratoire de Biogénèse Membranaire (LBM, CNRS) at the University of Bordeaux, France. He later conducted postdoctoral research as an EMBO Long-Term Fellow in the Cyril Zipfel Laboratory at The Sainsbury Laboratory (UK) and the University of Zürich (Switzerland), where he investigated immune receptor dynamics. Julien established the Nanosignaling Laboratory at the Center for Plant Molecular Biology (ZMBP) in Tübingen, Germany. He is currently a Tenure-Track Professor at the Technical University of Munich (TUM), School of Life Sciences.

INVITED SPEAKERS



Yansong Miao, Nanyang Technological University

Yansong Miao earned his bachelor's degree from Zhejiang University, followed by a master's and Ph.D. from The Chinese University of Hong Kong. He then completed his postdoctoral training at the University of California, Berkeley as an HFSP Postdoctoral Fellow. His interdisciplinary research uncovers the spatiotemporal regulation of biomolecular condensation in cell signaling, with a particular focus on nanoscale phase separation in plant immunity at the membrane. His work integrates biochemistry, single-molecule imaging, membrane biophysics, mathematical modeling, AI, and multiplex sensing to reveal how phase transitions activate or switch signaling states. He is a National Research Foundation Investigator, an EMBO Global Investigator, and an EMBO Journal Catalyst.



Xiaofeng Fang, Tsinghua University

Xiaofeng received his Ph.D. from the National Institute of Biological Sciences (NIBS) in 2015. He then did two rounds of postdoc training in Tsinghua University and the John Innes Centre, respectively, and joined Tsinghua University as a Principal Investigator in 2020. His lab focuses on the role of biomolecular condensates in plant abiotic stress perception, response, and memory.



Philip Wigge, Leibniz Institute

Philip Wigge is Professor of Plant Adaptation at the University of Potsdam and Head of Department at the Leibniz Institute of Vegetable and Ornamental Crops (IGZ), Germany. He earned an M.A. in Biochemistry from the University of Oxford and a Ph.D. from the University of Cambridge, followed by post-doctoral work at The Salk Institute. Since 2018 he has led research into how plants sense and adapt to ambient temperature, including his ERC-funded TIPTOP project on thermosensing mechanisms. His work spans molecular biology, synthetic biology and crop resilience research.

INVITED SPEAKERS



Monika Chodasiewicz, King Abdullah University of Science and Technology

Monika Chodasiewicz is an Assistant Professor in Plant Science at KAUST and an Executive Member of the Center of Excellence for Sustainable Food Security. She earned her Ph.D. in Plant Molecular Physiology, contributing to the discovery of the oxygen-sensing mechanism in plants—work highlighted by Sir Peter Ratcliffe in his 2019 Nobel lecture. She completed postdoctoral research at the Max Planck Institute of Molecular Plant Physiology, developing innovative methods to study small molecule–protein interactions. Since 2020, she has led a research group at KAUST focused on stress granules and biomolecular condensates in plants, pioneering a new direction in understanding plant stress responses.



Anthony Khong, National University of Singapore

Anthony Khong is an Assistant Professor in the Department of Physiology and the Cancer Science Institute at the National University of Singapore (NUS). He received his B.Sc. and Ph.D. from the University of British Columbia and completed postdoctoral training at the University of Colorado Boulder before joining NUS in 2023. His research focuses on RNA biology and biomolecular condensates, particularly how cells reorganize RNA and proteins during stress. As a member of Roy Parker's lab, he helped define the RNA composition of stress granules and showed they can form through non-specific RNA aggregation. His current work examines how stress granules influence cancer biology and cellular stress resilience.

INVITED SPEAKERS



Gregory Jedd, Temasek Life Sciences Laboratory

Gregory Jedd is a Senior Principal Investigator at the Temasek Life Sciences Laboratory (TLL) in Singapore, where he leads a research program exploring biodiversity to uncover the physiological and genetic basis of adaptive cellular traits. His group works across diverse branches of the tree of life, combining biochemical purification, mass spectrometry, and comparative genomics. Current research focuses on fungal multicellularity, gravity sensing, cytoplasmic phase transitions, and emerging marine model systems such as giant algal cells and obligate heterotrophic diatoms. By leveraging biodiversity, the Jedd Group reveals fundamental principles of cellular organization, evolutionary innovation, and new opportunities for biotechnological application.



Claudio Bussi, Nanyang Technological University

Claudio Bussi is a Nanyang Assistant Professor at NTU, where his lab investigates the critical interplay between biomolecular condensates and organelle membranes. A key focus is on lysosome quality control and membrane integrity, inspired by his discovery of stress granules plugging damaged lysosomes. His group uses advanced live-cell imaging to dissect these membrane repair mechanisms in health and disease. This research aims to understand how condensates orchestrate cellular responses to damage and explores the potential for condensate engineering as a novel therapeutic strategy. Claudio was previously a Marie Curie Fellow at the Francis Crick Institute.

INVITED SPEAKERS



Ruixi Li, Southern University of Science and Technology

Ruixi Li received her Ph.D. from Peking University in 2011 and completed postdoctoral training at the University of California, Riverside before joining Southern University of Science and Technology as a Principal Investigator in 2016. Her lab uses *Arabidopsis thaliana* to study secretory and autophagy-vacuolar transport pathways and their roles in plant growth, development, and stress adaptation. Recent work has revealed new mechanisms linking the endomembrane system with membraneless condensates. Over the past five years, her group has published in leading journals including *Developmental Cell*, *Nature Communications*, *The Plant Cell*, *Molecular Plant*, *Autophagy*, *Plant Physiology*, and *The Plant Journal*, with multiple papers highlighted for their impact.



Wenting Zhao, Nanyang Technological University

Wenting Zhao is currently an assistant professor in the School of Chemistry, Chemical Engineering, and Biotechnology at Nanyang Technological University, Singapore. She received her Ph.D. in Bioengineering at the Hong Kong University of Science and Technology and completed her postdoctoral training at Stanford University. Her research group aims to reveal the nanoscale interplay between membrane morphology and biomolecular assembly using advanced nanofabrication and nanomaterials. Specific focuses of her studies are on the nanoscale topography-guided protein clustering and complex assembly, and their impacts on disease progression, such as cancer progression, viral replication, and immune activation.

PROGRAMME

Day 1 - 10 Dec 2025 (Wednesday)

8:30 - 9:30 am	Registration
9:30 - 9:45 am	Opening Speech
9:45 - 10:30 am	Ji-Jie Chai - A Unified Mechanism of NLR-Mediated Immune Signaling in Plants
10:30 - 11:00 am	Tea Break (30min)

Session 1: Systems Biology and RNA (Chaired by: Oliver Mueller-Cajar)

11:00 - 11:30 am	Jose R. Dinneny - Life at the Interface: How Membrane Nanodomains Protect Plant Cells from Stress
11:30 - 11:50 pm	Yiliang Ding - Decoding RNA Language in Plants
11:50 - 12:04 pm	Emilio Gutierrez - Stress Granules as Regulatory Hubs for MAPK Signaling During Plant Stress Response
12:05 - 12:19 pm	Wei Wang - Duet Between Stress Granule and Glutathionylation Establishes Cytosolic Heterogeneity of Redox Potential to Maintain Proteostasis in Plants
12:20 - 2:00 pm	Lunch/Poster (1h 40min)

Session 2: Systems Biology and RNA (Chaired by: Bozeng Tang)

2:00 - 2:30 pm	Xuemei Chen - 5' Capping of RNA by Cellular Metabolites
2:30 - 2:50 pm	Shen Lisha - Phase Separation of RNA-Binding Proteins in Plant Development and Stress Responses
2:50 - 3:04 pm	Anthony Khong - Decoding Stress Granules Through the Lens of RNA Structure
3:05 - 3:19 pm	Zhongyuan Lu - Full-Length FUS Protein Condensates Exhibit Domain-Specific Architecture

PROGRAMME

Day 1 - 10 Dec 2025 (Wednesday)

3:20 - 4:00 pm	Tea Break (40min)
Session 3: Plant Biology (Chaired by: Lisha Shen)	
4:00 - 4:20 pm	Panagiotis N. Moschou - Membrane-Anchored Condensates Use Molecular Gradients to Sort RNAs and Amplify Cellular Responses
4:20 - 4:40 pm	Oliver Mueller-Cajar - Unravelling the Cellular Biochemistry of the Pyrenoid in a Marine Diatom
4:40 - 4:54 pm	Isaac Siu-Shing Wong - The Snap Hypothesis: Cooperative Transitions in Centriole Assembly
4:55 - 5:25 pm	Jiří Friml – New Roles for Second Messengers in Plant Signalling
5:30 - 6:00 pm	Day 1 End (Announcement & Bus to Wee Cho Yaw Plaza, NTU)
6:00 - 9:00 pm	Symposium Dinner at Wee Cho Yaw Plaza, NTU (All Attendees)

PROGRAMME

Day 2 - 11 Dec 2025 (Thursday)

Session 4: Biotic Signaling (Chaired by: Wei Ma)

9:30 - 10:00 am	Sheng Yang He - Deciphering the Role of a Transcriptional Machinery Condensate in Temperature-Dependent Plant Immunity
10:00 - 10:20 am	Chih-Hang Wu - EMBO GIN Lecture Fast and Furious: Plant Hypersensitive Cell Death in Action!
10:20 - 10:40 am	Jieshun Lin - Zinc as a Novel Second Messenger Mediates Control of Nitrogen Fixation via Transcription Factor Filamentation and Condensation
10:40 - 11:10 am	Tea Break (30min)



Session 5: Biotic Signaling (Chaired by: Yuchen Long)

11:10 - 11:30 am	Tolga Bozkurt - Chloroplast Tethering at the Pathogen Interface Underpins Plant Focal Immunity
11:30 - 11:50 pm	Julien Gronnier – Membrane-Based Regulation and Evolution of Cell Surface Signaling
11:50 - 12:10 pm	Yansong Miao - Unlocking Cell Type Specific-Phase Separation via <i>Arabidopsis</i> Crowding Atlas
12:10 - 2.00 pm	Lunch/Poster (1h 50min)
1:30 - 2.00 pm	Meet-with-Editor

Session 6: Plant Stress (Chaired by: Oliver Mueller-Cajar)

2:00 - 2:20 pm	Xiaofeng Fang - Understanding Plant-Environment Interactions via Biomolecular Condensation
2:20 - 2:40 pm	Philip Wigge – TBA
2:40 - 3:00 pm	Monika Chodasiewicz - Stress Granules: From Signaling to Tolerance
3:00 - 3:14 pm	Min Jia - Condensation of MAC5A Promotes SIZ1-Mediated Defense Activation in <i>Arabidopsis</i>
3:15 - 3:29 pm	Ke Li - Synthetic Non-Canonical Resistosome Confer Multipathogen Resistance Independent of NLRs

PROGRAMME

Day 2 - 11 Dec 2025 (Thursday)

3:30 - 3:40 pm	Group Photo
3:40 - 4:10 pm	Tea Break (30min)
Session 7: Phase Separation (Chaired by: Bozeng Tang)	
4:10 - 4:30 pm	Gregory Jedd - Instantaneous Protoplasmic Gelation
4:30 - 5:00 pm	Amy Gladfelter - How RNA can Encode Physical Information for Biomolecular Condensates
5:10 pm	Day 2 End
6:15 - 9:00 pm	Symposium Dinner (Invited Speakers + Organizers + Short Talk Speakers)

PROGRAMME

Day 3 - 12 Dec 2025 (Friday)

Session 8: Membrane-associated Condensation (Chaired by: Yansong Miao)

9:30 - 10:00 am	Hong Zhang - New Cornerstone Lecture Dynamic Ca ²⁺ Signals Drive Autophagosome Formation	 新基石科学基金会 NEW CORNERSTONE SCIENCE FOUNDATION
10:00 - 10:20 am	Claudio Bussi - Biomolecular Condensates and Lysosome Quality Control	
10:20 - 10:40 am	Ruixi Li - The Interplay Between Membrane System and Membraneless Condensates in Plant Cells	
10:40 - 11:20 am	Tea Break (40min)	

Session 9: Membrane-associated Condensation (Chaired by: Claudio Bussi)

11:20 - 11:50 am	Atul Parikh - Mixing Water, Transducing Energy, Shaping Membranes: Osmotically Induced Molecular Organization
11:50 am - 12:10 pm	Wenting Zhao - Nanoscale Curvature Enriches the Membrane-Associated Condensation of LAT/Grab2/SOS1
12:10 - 12:24 pm	Xiaohong Zhuang - Biomolecular Condensation of ERC Protein Family in Plant Autophagosome Formation
12:30 - 1:30 pm	Lunch
1:30 - 2:15 pm	Lucia Strader - Temperature and Movement Regulate Plant Condensates
2:15 - 3 pm	Closing Remarks and Poster Prizes

SUPPORTED BY



- Carl Zeiss Pte. Ltd.
- Leica Microsystems (SEA) Pte. Ltd.
- Scimed Asia Pte. Ltd
- Shenzhen New Cornerstone Science Foundation
- SPD Scientific Pte. Ltd.

SPECIAL THANKS TO

Singapore Bioscience Symposium 2025 Organising Committee

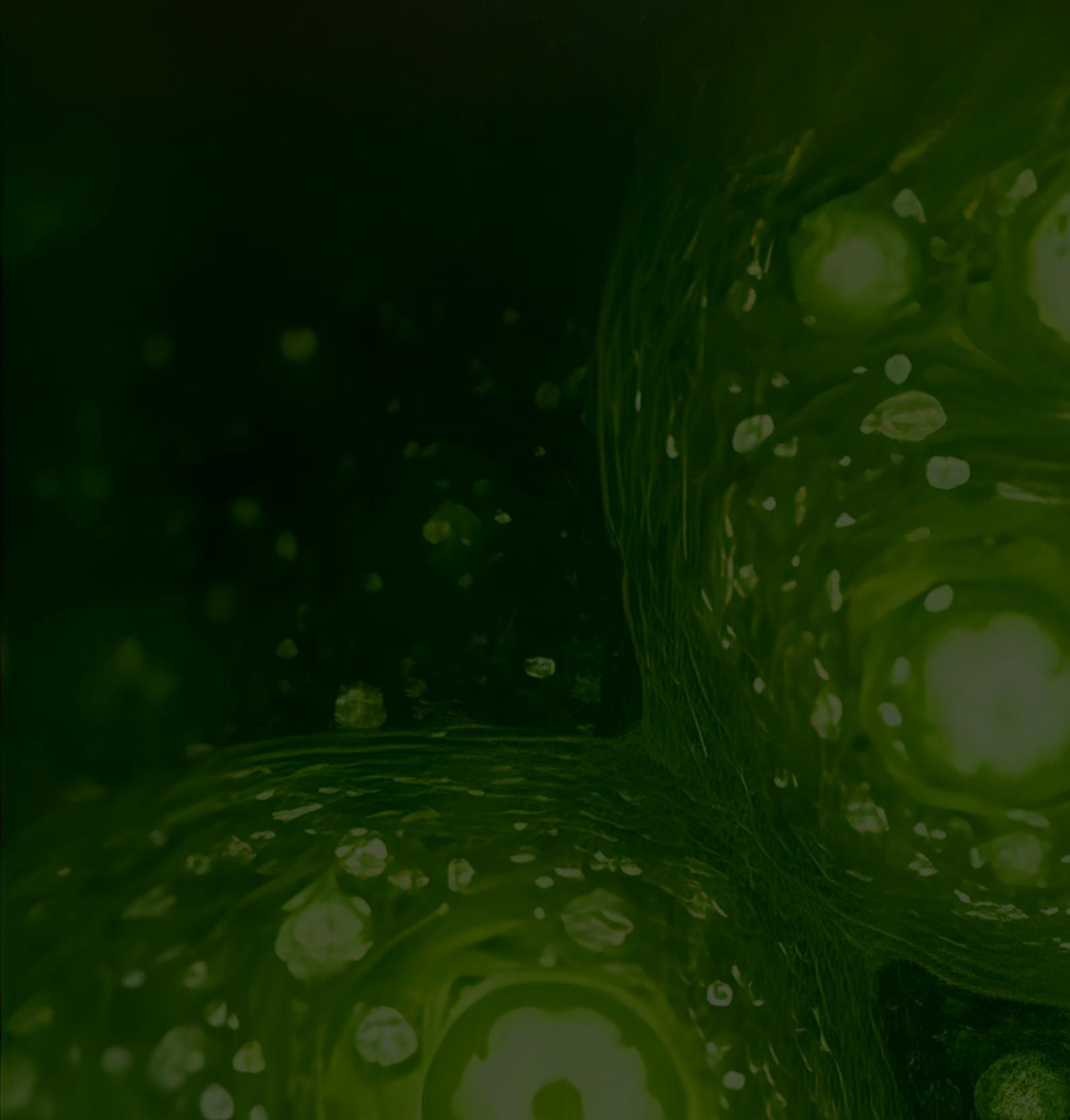
- Yansong Miao, Nanyang Technological University
- Oliver Mueller-Cajar, Nanyang Technological University
- Jarkko Salojärvi, Nanyang Technological University
- Wei Ma, Nanyang Technological University
- Kanaga Sabapathy, Nanyang Technological University
- Bozeng Tang, Nanyang Technological University
- Hao Yu, National University of Singapore
- Yuchen Long, National University of Singapore
- Lisha Shen, Temasek Life Sciences Laboratory

Administrative Staff

- Joseph Chen, Nanyang Technological University
- Yvonne Teo, Nanyang Technological University
- Jacquline Leong, Nanyang Technological University
- Fui Nee Lim, Nanyang Technological University
- Huat Yong Seow, Nanyang Technological University
- Ann Tan, Nanyang Technological University
- Nelly, Nanyang Technological University
- Wen Hui Hua, Nanyang Technological University
- Wei Hong Tang, Nanyang Technological University
- Kim Yin Tan, Nanyang Technological University
- Heinz Kurnia Pangestu, Nanyang Technological University

Institute of Advanced Studies

- Sum Tze Chien, Nanyang Technological University
- Chris Ong, Nanyang Technological University
- Christian Russell Teo, Nanyang Technological University
- Amanda Teng, Nanyang Technological University
- Nerissa Deviana, Nanyang Technological University



SCHOOL OF BIOLOGICAL SCIENCES



60 Nanyang Drive
Singapore 637551



www.ntu.edu.sg/sbs



@NTUSBS