

2025 Adelaide Biomedical Technology Symposium

PROGRAM SCHEDULE

Tuesday, 25 November 2025

8:30	Registration Open & Welcome Tea & Coffee	
9:00	Welcome: Dr Yannan Yang & A/Prof. Ivan Kempson	
9:05	Opening remarks: Prof Christopher Sweeney, Director of SAiGENCI	
9:15	PLENARY: Prof. Hala Zreiqat- University of Sydney <i>Strength in Diversity: From Discovery to Translation in BioEngineering</i> CHAIR: Dr. Yannan Yang ROOM: G030 Lecture Theatre	
10:00	Morning Tea	
Room Chair	G030 Lecture Theatre Dr. Mergen Ghayesh (School of Electrical and Mechanical Engineering, UoA)	G033 Joe Verco Lecture Theatre Dr. Qi Zhang (SAiGENCI, UoA)
10:30 Keynote	Prof. Michael Brown - SA Pathology and University of South Australia <i>CAR-T for solid cancers: The myeloid cell challenge</i>	Prof. Simon Barry - University of Adelaide <i>Using functional genomics to fine map the molecular basis of autoimmune disease</i>
11:00 Keynote	Prof. Krasimir Vasilev - Flinders University <i>Nanoengineered Materials and Coatings for Medicine and Beyond</i>	Prof. Michael Beard- University of Adelaide <i>Using the CRISPR Toolbox to Unravel the Virus Host Relationship</i>
11:30 Keynote	Prof. Chunxia Zhao - University of Adelaide <i>Nano-Mechanobiology in Drug Delivery</i>	Prof. Peter Hoffmann - University of South Australia <i>Mass Spectrometry and Proteomics Applications in Biomedical Research</i>
12:00 Invited	A/Prof. Branka Grubor-Bauk - University of Adelaide and Basil Hetzel Institute for Translational Health Research <i>Fine-Tuning mRNA Vaccines: The interplay of antigen design, lipid nanoparticle composition and delivery route</i>	Dr. Jean Winter - Flinders University <i>Discovery and application of novel biomarkers for detection of gastrointestinal cancers using multi-omics technologies</i>
12:15 Invited	Dr. Fatwa Adikusuma - University of Adelaide and South Australian Health and Medical Research Institute <i>Cutting-edge gene editing technology for autosomal-dominant genetic diseases</i>	A/Prof. Lisa Ebert - Royal Adelaide Hospital and University of South Australia <i>Biomarkers and drivers of patient outcome in cancer immunotherapy</i>
12:30	Lunch	
1:30	PLENARY: Prof. Chengzhong (Michael) Yu- University of Queensland <i>Bioinspired Nanoparticles for Biomedical Applications</i> CHAIR: A/Prof. Ivan Kempson ROOM: G030 Lecture Theatre	
Room Chair	G030 Lecture Theatre A/Prof. Ivan Kempson (Future Industries Institute, UniSA)	G033 Joe Verco Lecture Theatre Dr. Michael Roy (SAiGENCI, UoA)
2:15 Keynote	Prof. Clive Prestige - University of South Australia <i>Cancer Nanomedicine informing Antimicrobial Nanomedicine and vice versa</i>	Prof. Andrew Abell - University of Adelaide <i>New targeted approaches to diseases of oxidative stress</i>
2:45 Keynote	Prof. Benjamin Thierry - University of South Australia <i>FerroTrace: A Clinical Stage Nanoparticle Platform for Precision Surgery and Radiotherapy</i>	Prof. Ferry Melchels - University of South Australia <i>Biomaterials and Biofabrication</i>
3:15	Afternoon Tea	
Room Chair	G030 Lecture Theatre Dr. Mara Zeissig (SAiGENCI, UoA)	G033 Joe Verco Lecture Theatre A/Prof. Antonella Papa (SAiGENCI, UoA)
3:45 Keynote	Prof. Nikolai Petrovsky - Vaxine Pty Ltd and Flinders University <i>From tackling COVID-19 and pandemic influenza to vaccines against cancer and Alzheimer’s disease; a scientist’s job is never done</i>	A/Prof. Jiawen Li - University of Adelaide <i>Ultrathin multimodal imaging devices: from bench to bedside and boardroom</i>
4:15 Invited	Dr. Tessa Gargett - SA Pathology and University of South Australia <i>Made in SA: CAR-T cell therapy for adult and paediatric patients with brain tumours</i>	Dr. Feargal Ryan - Flinders University <i>The Human Body is Not a Collection of Compartments</i>
4:30 Invited	Dr. Paul Joyce - University of South Australia <i>Targeting the Gut Microbiome for Controlled Drug Delivery</i>	Dr. Fuyi Li - University of Adelaide <i>Learning Biomolecular Knowledge with Graph Deep Learning</i>
4:45 Invited	Dr. Lukas Gerstweiler - University of Adelaide <i>mRNA manufacturing at Adelaide University</i>	Dr. Michael Roy - University of Adelaide <i>Building Bridges: Harnessing Induced Proximity and Targeted Protein Degradation for Drug Discovery</i>
5:00	Poster Awards Announcement and Symposium Closing Remarks A/Prof. Ivan Kempson & Dr Yannan Yang	

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POSTER PRESENTERS

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Srinivas Kamath University of South Australia	Prebiotic-Functionalised Lipid Nanocarrier Platform: Dual Approach to Mitigate Olanzapine-Induced Metabolic Dysfunction and Enhance Pharmacokinetic Stability
Vincent Linden University of Adelaide	Democratising Nanomedicine Production: Low-Cost, User-focused Microfluidic Platforms for mRNA Nanoparticle Synthesis
Jaslene A. Francis University of Adelaide	Idiosyncratic Behaviour of Pegylated Lipid Nanoparticles Used in RNA Delivery: A Dynamic Light Scattering Study
Yannis Karavias University of Adelaide	Continuous Manufacturing of Aspartic Acid Protease in Komagataella Phaffii
Cinderella Nowak University of Adelaide	Optimization and Understanding of In-Vitro Transcription for mRNA Manufacturing Using Multi-Objective Bayesian Optimization and SHAP Analysis
Rebekah Munro University of Adelaide	Phenolic Extracts of Brewer’s Spent Grain Offer Novel Modulators of Protein Aggregation for Parkinson’s Disease
Joe van den Bergh University of Adelaide	Developing Expansion Microscopy for Mosquitoes to Investigate the Biology of Mosquitoes and Mosquito Transmitted Pathogens
Manuella Cazelato Pires University of Adelaide	Double Network Polysaccharide Microspheres for Purification of Biomolecules
Mong Phi An Cao University of Adelaide	Developing in Vitro Assays to Characterise Small Molecule Inhibitors Targeting Factor Inhibiting HIF-1 (FIH)
Haripriya Koppiseti University of South Australia	One Shot to Beat Depression: The Future of Mental Health Treatment
Anam Ahsan University of South Australia	Enhancing Biofilm Eradication with Co-Loaded LCNPs for Potential Clinical Translation
Abbey R. Marshall University of South Australia	Investigating Dual Targeting GD2 and FAP CAR T-cells for the Treatment of Brain Malignancies
Yi Chen University of Adelaide	Deep Learning for Intravascular Optical Coherence Tomography: A Review of Plaque Analysis
Linh VP Dang SAHMRI	Cell-type Specific Autophagy in Human Leukocytes
Xavier B. Montin University of Adelaide	CRISPR Activation of Interferon Stimulated Genes: Dual Approaches to Screening for Antiviral Effects against Orthoflaviviruses
Kaveh Moghadasi Koohi University of Adelaide	Computational Technology for Hemodynamic Analysis of Carotid Artery Stenosis
Siavash Aghili University of Adelaide	Design of Bacteriophage Scaffold for Electrospun Phage-Loaded Wound Dressings
Eva F. Hayball University of Adelaide	N-Heterocyclic Steroid Derivatives as Inhibitors of the Cytochrome P450 Enzymes from Mycobacterium Tuberculosis
Jieren Zheng University of Adelaide	Optimization of Chimeric Antigen Receptor T Cells for Solid Tumour Immunotherapy
Katrina Louise Schiller University of Adelaide	Discovery of Novel Protein-protein Interactions of Calcium and Integrin Binding Protein 1 (CIB1)
Eunwoo Nam University of South Australia	Armouring GD2 Chimeric Antigen Receptor (CAR)-T Cells with Chemokine Receptors to Treat Glioblastoma
Thomas Andrew Lymburn University of Adelaide	Uncovering Functionally Relevant Interactions with Hypomyelinating Leukodystrophy-associated Dihydroceramide Desaturase (DEGS1)
Ashleigh B. Geiger University of Adelaide	Pushing the ENVLPE+: Virus-like Particle Delivery of CRISPR Prime Editors in Human Pluripotent Stem Cells
Moataz B. Zewail University of Adelaide	Nanoparticle Core Guides the Choice of Cell Membrane Coating Method
Tong Pan Monash University	Advancing Protein Function Annotation with Equivariant Graph Networks
Jie Liu University of Adelaide	A Graph-Transformer Foundation Model for Bioactive Molecule Prediction