

MONDAY, 22nd JUNE 2026

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| 8:30 | REGISTRATIONS OPEN & Welcome Tea & Coffee | | |
| 9:00 | WELCOME: Professors Maria Kavallaris, Kris Kilian & Rona Chandrawati | | |
| 9:15 | OPENING: Professor Cheryl Jones, Dean of Medicine and Health, UNSW | | |
| 9:30 | PLENARY: Milan Mrksich - Northwestern University MegaMolecules and Applications as Antibody Mimics CHAIR: Kris Kilian ROOM: Water@Pier One | | |
| 10:10 | MORNING TEA | | |
| SESSION Chair Room | Drug Delivery Zi (Sophia) Gu Water@Pier One | BIOMATERIALS & BIO-NANO INTERFACE Peter Wich Dawes Point 1&2 | SENSORS & IMAGING Ying Zhu Dawes Point 3&4 |
| 10:40 Keynote | Wojciech Chrzanowski - The University of Sydney - Extracellular Vesicles as Multispecific Therapeutics for Longevity Medicine | Martina Stenzel - UNSW Sydney - Glycopolymers for solid brain tumour drug delivery | Hyungsoon Im - Massachusetts General Hospital - Molecular Analysis of Extracellular Vesicles for Cancer Diagnosis and Treatment Monitoring |
| 11:10 Invited | Changkui Fu - The University of Queensland - Overcome the Challenge of PEG Immunogenicity in Nanomedicine | Chun Xu - The University of Sydney - Intra-articular Nanoparticles based Therapies for Osteoarthritis Management | Hoang-Phuong Phan - UNSW Sydney - Nanothin Silicon Cantilevers for Wearable and Organ-on-Chip Applications |
| 11:30 Invited | Horacio Bach - University of British Columbia - A Novel Approach for Treating Intracellular Mycobacteria | Francesca Cavallieri - The University of Rome - Engineering Sugar-based Nanoparticles for Delivery of Biotherapeutics | Muhammad J.A. Shiddiky - Charles Sturt University - A Portable Universal Device for Fast, On-the-Go Molecular Diagnostics |
| 11:50 Oral | Bill Cheng - National Chung-Hsing University - Engineering Immune Cell-Guided Nanomedicine to Reshape the Tumour Microenvironment | Reina Ogino (Tanaka) - Showa Medical University - Defect-Engineered TiO ₂ for Coupling Biofunction and Electrochemical Stability | Fei Deng - UNSW Sydney - Autocatalytic Cas13a Biosensor Enabled by RNA-Nanocircles for Ultrasensitive RNA Detection |
| 12:10 | LUNCH | | |
| 1:10 | PLENARY: Amy Shen - Okinawa Institute of Technology Graduate University Microfluidic Engineering for Nanomedicine: Linking Fluid Dynamics with Next-Generation Biosensing CHAIR: Rona Chandrawati ROOM: Water@Pier One | | |
| SESSION Chair Room | DRUG DELIVERY Amir Popat Water@Pier One | BIOMATERIALS & BIO-NANO INTERFACE RuiRui Qiao Dawes Point 1&2 | TISSUE ENGINEERING & MICROPHYSIOLOGICAL SYSTEMS Junmin Lee Dawes Point 3&4 |
| 1:55 Keynote | Charlotte Conn - RMIT University - Cubosome Lipid Nanoparticles: Linking Internal Nanostructure to Cellular Uptake and Cytosolic Delivery | Tai Wei David Leong - National University of Singapore - Engineering Endothelial Leakiness and Defect Engineered Transition Metals Dichalcogenides for Enhanced Cancer Killing | Fariba Dehghani - The University of Sydney - Architected and Translatable Biomaterial Platforms for Regenerative Medicine and Dynamic Biomedical Implants |
| 2:25 Invited | Guojun Chen - McGill University - Bioresponsive Immunomodulator Nanocomplex for Selective Immunoengineering in Metastatic Lymph Nodes | Richard Lobb - The University of Queensland - Digital SERS Profiling of Extracellular Vesicles at Single-Vesicle Resolution | Seo Woo Song - Korea Institute of Science and Technology - Tissue Engineered Blood Vessel Array to Study Vascular Diseases |
| 2:45 Invited | Christina Cortez-Jugo - The University of Melbourne - Carrier-free Nanodrugs for Biomedical Applications | Xueguang Lu - Chinese Academy of Sciences - Mucosal mRNA Vaccines for Infectious Diseases and Cancer | Giulia Silvani - UNSW Sydney - Micro-physiological Systems for Controllable Drug Delivery to the Brain |
| 3:05 | AFTERNOON TEA | | |
| SESSION Chair Room | DRUG DELIVERY Christina Cortez-Jugo Water@Pier One | BIOMATERIALS & BIO-NANO INTERFACE Francesca Cavallieri Dawes Point 1&2 | SENSORS & IMAGING Guocheng (Eric) Fang Dawes Point 3&4 |
| 3:40 Invited | RuiRui Qiao - The University of Queensland - Precision Nanomedicine for Brain Gene Delivery: From Engineered Nanoparticles to Microgel-Based Disease Models | David Nisbet - The University of Melbourne - Engineering Materials for Cell Transplantation and Reprogramming in the Brain | Peng Chen - Nanyang Technological University - Kinetic Fingerprinting of DNA Binding at Single-molecule Level with Single-base-mismatch Specificity by Interferometric Scattering Microscopy |
| 4:00 Invited | Yi (David) Ju - Olivia Newton-John Cancer Research Institute - Toward Predictable mRNA-Lipid Nanoparticle Drug Delivery: Lessons from Human Blood Kinetics of mRNA Vaccines | Junmin Lee - POSTECH - Biomaterial-Based Platforms for Advanced and Personalized Tissue Models | Run Zhang - The University of Queensland - Monitoring and Modulating Inflammation to Improve Cancer Photothermal Therapy |
| 4:20 Invited | Li Li - Charles Sturt University - Responsive Biomaterials: A Next-Generation Approach for Precision Nanomedicine and mRNA Delivery | Jessica Kretzmann - The University of Western Australia - Encoding Structures: DNA Design and Biological Function | Tong Ling - Nanyang Technological University - Interferometric Imaging of Cellular Nanomotion with Functional and Biological Insights |
| 4:40 Invited | Nhiem Tran - RMIT University - Targeting Autoimmune Kidney Disease with Lipid Nanoparticles | Sang Ihn Han - Korea Institute of Science and Technology - Stretchable Conductive Nanocomposites Based on Nanowires in Elastomeric Matrix for Cardiac Electrophysiological Interfacing | Kevin M. Koo - The University of Queensland - Clinical Biosensor Validation Framework for Decentralised Prostate Cancer Liquid Biopsy Analysis |
| 6:30- 9:00 | CONFERENCE DINNER - Water @Pier One | | |

TUESDAY, 23rd JUNE 2026

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|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:30 | REGISTRATIONS OPEN & Welcome Tea & Coffee | | |
| 9:00 | <p>PLENARY: Nicolas H. Voelcker - Monash University</p> <p><i>Spiky Biointerfaces – Nano-Micro Needle Arrays for Closed-Loop Medicine</i></p> <p>CHAIR: Rona Chandrawati ROOM: Water@Pier One</p> | | |
| SESSION | DRUG DELIVERY | BIOMATERIALS & BIO-NANO INTERFACE | TISSUE ENGINEERING & MICROPHYSIOLOGICAL SYSTEMS |
| Chair Room | Christoph Hagemeyer Water@Pier One | Megan Lord Dawes Point 1&2 | Ming Li Dawes Point 3&4 |
| 9:45 Keynote | Nigel McMillan - Griffith University - Next-generation Lipid Nanoparticles (ngLNPs) Inspired by Extracellular Vesicles for Targeted, PEG-free, RNA Delivery for Vaccines and Gene Therapies | Natalie Trevaskis - Monash University - Lymphatic Transport, Pharmacokinetics, and Biodistribution of mRNA-lipid Nanoparticles after Intravenous and Subcutaneous Administration | Brendan Harley - University of Illinois Urbana-Champaign - Granular Niches: New Frontiers for Engineered Tissue Models |
| 10:15 Invited | Pegah Varamini - The University of Sydney - Development of Cancer Cell Membrane-Coated Biomimetic Nanoparticle Systems for Targeted Treatment of Triple-Negative Breast Cancer | Jun Nakanishi - National Institute for Materials Science - Cell Adhesion Behaviours at Liquid-Liquid Interfaces | Yongdeok Kim - Korea Institute of Science and Technology - Biopreservation Study using 3D Cellular System Testbeds |
| 10:35 | MORNING TEA | | |
| SESSION | DRUG DELIVERY | BIOMATERIALS & BIO-NANO INTERFACE | TISSUE ENGINEERING & MICROPHYSIOLOGICAL SYSTEMS |
| Chair Room | Pegah Varamini Water@Pier One | Jun Nakanishi Dawes Point 1&2 | Yongdeok Kim Dawes Point 3&4 |
| 11:10 Invited | Qi (Hank) Han - RMIT University - Ionic Liquid Permeation Enhancers for Oral Insulin Delivery: linking nanostructure, permeability and gastric mucosal safety | Rongqin Huang - Fudan University - Intraoperative Nanotherapeutic Systems for Inhibiting Postoperative Tumor Recurrence and Metastasis | Nasim Amiralian - The University of Queensland - Dual-Functional Nanocellulose-Based Antimicrobial and Low-Fouling Coatings for Infection-Resistant Surfaces |
| 11:30 Invited | Abraham Teunissen - Icahn School of Medicine at Mount Sinai - Promoting Organ Transplant Acceptance by Myeloid-specific Calcineurin Inhibition | Lei Bao - RMIT University - Carbon-Dot Nanozyme Functionalised Responsive Hydrogels | Vi Khanh Truong - Flinders University - Dynamic Nano-Biointerfaces for Coordinated Antimicrobial Defence and Immune-Regenerative Modulation |
| 11:50 Invited/ Oral | (Oral) Amy Logan - Children's Cancer Institute - 3D Bioprinted Tumouroids for Predictive Drug Delivery Testing | (Oral) Kun Zhou - The University of Sydney - Deployable 3D-Printed Vascular Stent with Surface-Catalysed Endogenous Nitric Oxide Generation | Hyojin Lee - Korea Institute of Science and Technology - Nanoporous Freeze-Dried Architectures for Stable and Scalable Biopharmaceutical Delivery |
| 12:10 Oral | Vittorio Picchio - Sapienza University of Rome - Killing of Gold Nanorods-loaded Human Cardiac Fibroblasts Mediated by Photo-thermal Activation | Qiaoyun Wang - UNSW Sydney - PEG-Fructose Ratio Engineering in SCNPs for Tumor Selectivity and Immunometabolic Modulation | Peilin Tian - UNSW Sydney - Drop-on-demand 3D Bioprinting of Patient-derived Colorectal Cancer Spheroids Enables High-throughput Screening of a CEACAM5-targeted SN-38 ADC |
| 12:30 | Lunch | | |
| 1:30 | <p>PLENARY: Tejal Desai - Brown University</p> <p><i>Engineering Precision Biomaterials: Implications for Therapeutic Delivery and Immune Modulation</i></p> <p>CHAIR: Kris Kilian ROOM: Water@Pier One</p> | | |
| SESSION | POSTER SETUP | DRUG DELIVERY | SENSORS & IMAGING |
| Chair Room | Water@Pier One | Fed Mazur Dawes Point 1&2 | Lei Bao Dawes Point 3&4 |
| 2:15 Invited/ Oral | POSTER SETUP | (Oral) Shiyao Li - Olivia Newton-John Cancer Research Institute - Engineering Lipid Nanoparticles with Crystalline Mesophases | Elizabeth Hinde - The University of Melbourne - Live Cell Pair Correlation Microscopy of Nanoparticle Delivery Dynamics |
| 2:35 Oral | | Shevanuja Theivendran - The University of Queensland - Silica Nanoparticle-Mediated Oral DNA Delivery: A pharmacokinetic understanding | Jiuyu Cui - UNSW Sydney - Using Liquid Biopsy to Track Cancer Dynamics in Lab-grown Tissues |
| 2:55 | AFTERNOON TEA | | |
| SESSION | POSTER SETUP | CLINICAL CHALLENGES | INDUSTRY SESSION |
| Chair Room | Water@Pier One | Ben Kong Dawes Point 1&2 | Fed Mazur Dawes Point 3&4 |
| 3:20 Invited | POSTER SETUP | Jason Abbott - UNSW Sydney - Challenges and Opportunities in Endometriosis Diagnosis and Management: Time to Disrupt, not Double Down | Rena Hirani - Australian Red Cross Lifeblood - Blood, Donors, and Nanotech: Can we Shape the Future of Transfusion Medicine |
| 3:40 Invited | | Joanneke Maitz - University of Sydney/Concord Hospital - Skin Tissue Engineering in Burns | Riccardo Cazzoli - Valetudo Medtech - Targeted Uptake Therapy (TrUTH): The Drug Delivery Breakthrough that Built a Company |
| 4:05 | POSTER PRESENTATION COMPETITION - Water@Pier One Chair: Peter Wich | | |
| 5:00 - 6:00 | POSTER SESSION - Water@Pier One | | |
| 6:00 | POSTER PRIZE AWARDS ANNOUNCEMENT & PRESENTATION - Water@Pier One | | |
| 6:00 - 7:30 | Networking Dinner & Drinks - Outdoor Pier | | |

Poster presentations will take place in two sessions:

1) Three minute poster presentation session from 4pm in Water@Pier One

a. Through this session presenters must succinctly highlight the unique aspects of your research, as well as comment on commercial opportunities using no more than three PowerPoint slides.

b. Presenters in this session are eligible for one of four (4) poster prizes to be judged during the session.

c. Presenters in this session must also display their posters in the traditional session (described below).

2) Traditional poster display from 5:00 in Water@Pier One

a. All poster presenters must display their paper in the traditional poster session, and be with their poster on Tuesday evening to discuss their work.

b. Poster boards will be available in the Plenary room for presenters to hang their posters after afternoon tea on Tuesday.

c. Please collect your poster at the conclusion of the poster session, or from the registration desk on Wednesday.

WEDNESDAY, 24th JUNE 2026

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| REGISTRATIONS OPEN & Welcome Tea & Coffee | | | |
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| 8:30 | JOSHUA MCCARROLL PLENARY: Jason Lewis - Memorial Sloan Kettering Cancer Center <i>Theranostics -- "See What You Treat and Treat What You See."</i> CHAIR: Maria Kavallaris ROOM: Water@Pier One | | |
| 9:00 | | | |
| SESSION Chair Room | DRUG DELIVERY Zi (Sopiha) Gu Water@Pier One | BIOMATERIALS & BIO-NANO INTERFACE Ruirui Qiao Dawes Point 1&2 | SENSORS & IMAGING Abu Sina Dawes Point 3&4 |
| 9:45 Keynote | Chunxia Zhao - Adelaide University - Advancing Nanomedicines: From Design to Manufacturing Toward Clinical Translation | Oliver Friedrich - University of Erlangen-Nuremberg - 'Stressed out' - Opto-Biomechanics Systems Engineered for Soft Tissue Structure-Function Studies | Irina Kabakova - University of Technology Sydney - Brillouin Imaging for Applications in Biomedicine |
| 10:15 Invited | Christoph Hagemeyer - Monash University - An Artificial β -Cell in a Nanoparticle: Glucose-Responsive Insulin Delivery for Type 1 Diabetes | Wei Tang - National University of Singapore - Engineering Autologous Cancer Vaccines and Circular mRNA Platforms for Personalized Immunotherapy | John Lock - UNSW Sydney - Deep Multiplexed Single-Cell Imaging Reveals that Cell Phenotypic State Pre-tunes Oncogenic Signalling Characteristics, including Signalling Noise |
| 10:35 | MORNING TEA | | |
| SESSION Chair Room | DRUG DELIVERY Kristian Kempe Water@Pier One | TISSUE ENGINEERING & MICROPHYSIOLOGICAL SYSTEMS Rosa Ignacio Dawes Point 1&2 | SENSORS & IMAGING Fei Deng Dawes Point 3&4 |
| 11:10 Invited/ Oral | (Oral) Zihnil Mazrad - Monash University - Design of a Sustainable mRNA Delivery Platform Using Lipid-Polyhydroxyalkanoate | Chengxue Helena Qin - Monash University - Targeting Resolution Biology to Modulate Vascular Inflammation | Alain Wuethrich - The University of Queensland - Single-Molecule Nanotechnologies for Digital Immunoprofiling |
| 11:30 Invited/ Oral | (Oral) Jingqu Chen - The University of Melbourne - Bioactive Metal-Organic Nanoparticles: A Versatile Platform for Therapeutic Delivery | Jin Yoo - Korea Institute of Science and Technology - Engineering Sprayable Hydrogels for Enhanced Wound Regeneration and Tissue Engineering Applications | Essam Dief - UNSW Sydney - Development of Stable Aptamer-based Sensors as a Universal Sensing Platform |
| 11:50 Oral | Andrew Pike - Newcastle University UK - The Next Revolution in Sovereign DNA Production isn't Coming - it's already here | Bram Soliman - UNSW Sydney - Interfacial Stress-driven Drug Resistance is Affected by Breast Cancer Shape | Christoph Kugler - University of Vienna - Tri-modal Longitudinal Tomographic Imaging of Tumor Growth in vivo by Nanoparticle-loaded Microcapsules |
| 12:10 Oral | Lingqing Zong - UNSW Sydney - Geobacter Sulfurreducens Armed with Biosynthetic Gold Nanoparticles for Tumor-Selective Cascade Catalytic Cancer Therapy | Varshini D. Venkata - Children's Cancer Institute - Development of a 3D ex vivo Bioprinted Immunocompetent Model of Neuroblastoma | Lucy Johnston - UNSW Sydney - Stretchable Nanoporous Thin Film Gold via Liquid-metal-driven Synthesis for Wearable Applications |
| 12:30 | LUNCH | | |
| SESSION Chair Room | DRUG DELIVERY Alexis Minchaca Water@Pier One | BIOMATERIALS & BIO-NANO INTERFACE Bram Soliman Dawes Point 1&2 | DRUG DELIVERY Shu Geng Dawes Point 3&4 |
| 1:30 Oral | Linqing Tian - UNSW Sydney - Controlled Formation of Ultrasmall Nanoparticles with Direct Cytosolic Access | James Paoloni - UNSW Sydney - Decoding Endothelial Glycocalyx-nanoparticle Interactions via a Systematic Polymeric Nanoparticle Library and High-content Characterization | Siti Nur Asyura Adzlan - UNSW Sydney - Nitric oxide-generating polymer amine coating on titanium using bio-inspired crosslinker |
| 1:50 Oral | Åsa Jämting - National Measurement Institute - Building Trust in Particle Size Measurements: the Challenge of Lipid Nanoparticles | Xie (Kate) He - The University of Queensland - Affinity-Tuned Albumin Hitchhiking Extends the Bioorthogonal Capture Window in Pretargeting Radiotheranostics | Maria Victorova - The University of Queensland - Enzymatically and Chemically Synthesised mRNA as a Therapeutic Agent |
| 2:10 Oral | Timen Mooren - Katholieke Universiteit Leuven - Red Blood Cell-Inspired CD47 Proteoliposomes Enable Immune-Evasive Nanocarriers | Bhagya Abeygunasekara - The University of Western Australia - Intracellular Protein Corona Dynamics of DNA Origami Nanostructures | Shakil Polish - RMIT University - Bioinspired Gold Nanoparticles Enhance Cell Adhesion |
| 2:30 Oral | Elisa Sophia Kulterer - University of Vienna - DNA-stuffer in mRNA-polyplexes Improves Endosomal Escape and Functional mRNA Delivery In Vitro and In Vivo | Duong Dinh - UNSW Sydney - Photo-responsive Peptide Hydrogel for Spatiotemporal Control of Embryoid Morphogenesis | Yuan Zhang - UNSW Sydney - Broad-Spectrum Intranasal LNP-siRNA Therapeutics against SARS-CoV-2: Targeted Nasopharyngeal Delivery and In Vivo Antiviral Efficacy |
| 2:50 | AFTERNOON TEA | | |
| SESSION Chair Room | DRUG DELIVERY Kang Lin Water@Pier One | DRUG DELIVERY Amy Logan Dawes Point 1&2 | TISSUE ENGINEERING & MICROPHYSIOLOGICAL SYSTEMS Peilin Tian Dawes Point 3&4 |
| 3:20 Oral | Hyeon Hae Lee - The University of Melbourne - Towards Predicting Cellular Lipid Nanoparticle Uptake Across Doses with Transferable Kinetics | Jiaying Li - Monash University - Polymer Nanorods Formed by Selectively Hydrolysed Block Co-Poly(2-oxazolines): Stimuli-responsive Disassembly and Tuneable Cell Interactions | Tesi Liu - Adelaide University - A Novel Pumpless Microphysiological Platform for Long-term Glioblastoma Tissue Slice Culture and Personalized Radiotherapy |
| 3:40 Oral | Jie Lay Lim - UNSW Sydney - Biomimetic Nanomotor in Drug Delivery Towards Pancreatic Cancer | Alireza Sarkar Lotfabadi - Children's Cancer Institute - Targeted mRNA-LNPs for In Vivo Generation of CAR T Cells in Syngeneic Mouse Models of Diffuse Midline Glioma | Kelly Mint - Monash University - Chiral Poly(2,4-dialkyl-2-oxazoline) Cryogel Scaffolds for Tissue Engineering and Drug Delivery |
| 4:00 Oral | Jordan Kambanis - The University of Sydney - Lipid Nanoparticle-Extracellular Vesicle Hybrids for Enhanced Delivery to Retinal Cells | Nirasha Wickramasinghe - UNSW Sydney - Inhibiting TOPORS Activity to Sensitise Acute Myeloid Leukemia Cells to Hypomethylating Agents | Xinyang Li - UNSW Sydney - Moisture-resistant polydiacetylene-based colorimetric sensors for meat spoilage detection |
| 4:30 | CLOSING CEREMONY & ORAL PRIZES ANNOUNCEMENT - Water@Pier One | | |
| 5:00 | FAREWELL DRINKS & PIZZA - Outdoor Pier | | |