

THE 4th AUSTRALASIAN GLYCOSCIENCE SYMPOSIUM & 9th WARREN WORKSHOP FOR GLYCOANALYTICS



SeaWorld Resort
22 – 25 November 2022
GOLD COAST QLD Australia



Draft Program

Tuesday 22 nd November 2022	
Location: Institute of Glycomics, Griffith University, Gold Coast Campus	
3.00pm	Bus departs SeaWorld Resort to Griffith University
3.00 – 4.00pm	Welcome and registration Chairs: Daniel Kolarich & Nichollas Scott
4.00 – 4.15pm	Opening and Welcome to Country Daniel Kolarich & Nichollas Scott
4.15 – 4.20pm	Welcome to the Institute for Glycomics Mark von Itzstein
4.20 – 5.15pm	OPENING KEYNOTE: Taming glycoconjugate structure and interactions in development and disease Mia Huang
5.15 – 5.30pm	Official inauguration of the Australian Glycoscience Society Morten Thaysen-Andersen
5.30 – 7.30pm	Welcome reception at Glycomics (includes tours of the institute)
7.45pm	Bus departs Griffith University to SeaWorld Resort
Wednesday 23 rd November 2022	
Location: Sea World Resort Conference Centre	
7.30 – 5.00pm	Registration and Exhibition Open
8.30 – 10.20am	Session 1: Clinical Glycobiology Chair: Joe Tiralongo Co-Chair: Katherine Wongtrakul-Kish
8.30 – 9.00am	KEYNOTE 1: Platelet glycans: take the bitter with the sweet Dianne von der Wal
9.00 – 9.30am	KEYNOTE 2: Immunological responses against glycosylated biotherapeutics and biodevices in humans Vered Padler-Karavani
9.30 – 9.45am	Polysialic acid is dysregulated in the autoimmune disease scleroderma Lisa Willis
9.45 – 10.00am	Shear stress-dependent, non-canonical E-selectin ligands mediate tumor cell adhesion with low affinity and are targetable by proteasome inhibition to prevent lung Tobias Lange
10.00 – 10.15am	Spatiotemporal glycoprofiling of resting and maturing neutrophils reveals granule- and development stage-specific N-glycosylation Julian Ugonotti
10.15 – 10.20am	Update from Merck

10.20 – 10.45am	Morning Tea	
10.45 – 12.30pm	Session 2: Discovery Glycobiology	Chair: Nicki Packer Co-Chair: Christopher Ashwood
10.45 – 11.15am	KEYNOTE 3: A glycodecode for the dynamics of breast cancer migration	Ramray Bhat
11.15 – 11.45am	KEYNOTE 4: Identifying the Regulatory Network of O-GlcNAc-Cyclers	Natasha Zachara
11.45 – 12.00pm	The SARS-CoV-2 S glycan shield evolution: Implications in immune evasion and viral infection along the phylogeny and VoCs	Elisa Fadda
12.00 – 12.15pm	From MEMS to Carbon Dots: When Glyco meets Nano	Joe Tiralongo
12.15 – 12.30pm	Deciphering the role of selective N-glycosyl modification in fate biasing of melanocytes from Neural crest cells	Babita Sharma
12.30 – 1.30pm	Lunch including sponsor workshop	
12.40 – 1.20pm	Workshop: Advances in Translational Glycoproteomics	Sponsored by InterVenn
	Advances in translational glycobiology	Klaus Lindpainter
	Peripheral blood glycoproteomic biomarkers as a powerful tool for the detection of nasopharyngeal carcinoma (NPC)	Thin Thin Aye
1.30 – 3.00pm	Session 3: Integrating Omics – Warren Workshop	Chair: Ben Schulz Co-chair: Catherine Hayes
1.30 – 2.00pm	KEYNOTE 5: The glycome: The missing link in extracellular vesicle research	Joy Wolfram
2.00 – 2.15pm	Ultra-sensitive platelet proteome maps the O-glycosylation landscape and charts the response to thrombin dosage	Mark Larance
2.15 – 2.30pm	Prostate cancer risk-associated single-nucleotide polymorphism affects prostate-specific antigen glycosylation and its function	Jyotsna Batra
2.30 – 2.45pm	Systems biology glycoproteomics, proteomics and metabolomics to investigate beer and wine production	Ben Schulz
2.45 - 3.00pm	Contextual tissue using AI-Empowered precision microscopy	Rupert Ecker
3.00 – 3.45pm	Speed talks (3 minutes each)	Chair and Moderator: Ethan Goddard-Borger
3.00pm	Spatial distribution, protein carriers and cellular origins of paucimannosidic glycosignatures in colorectal cancer tissue	Naaz Bansal
3.03pm	Utilisation of Cyclic Ion Mobility with multiple pass acquisition for the analysis of glycopeptides and glycoforms associated with SARS-CoV-2	Heather Patsiouras
3.07pm	Glycobiology in 3D – informatics, quality control, model building and molecular dynamics	Martin Frank
3.10pm	A new synthetic method for asymmetrically substituted Trehalose Derivatives	David Hsu
3.14pm	Examining the salivary N-glycome during experimental Streptococcus pyogenes infection	Anuk Indraratna

3.17pm	Hyper-truncated N -glycosylation of neutrophil azurocidin enables binding to P. aeruginosa PA-IIL (LecB)	Harry Tjondro
3.21pm	Distinct N-glycan signatures of cancer and immune cells from ovarian cancer ascites	Katherine Wongtrakul-Kish
3.24pm	Comprehensive glycoproteome profiling of resting and thrombin-activated platelets	Kevin Chau
3.27pm	MicroGlycoDB: a prototype database of microbial glycan-related information	Atsuto Uchino
3.30pm	Investigating the CASD1 enzyme as a novel therapeutic target against melanoma	Sam Heddes
3.34pm	Ganglioside GM3 interacts with basic amino acids just above the transmembrane domain of the insulin receptor	Kazuya Kabayama
3.37pm	Quantitative analysis of galectin-dependent glycoprotein dynamics in synthetic glycan chemical knock-in cells	Ayane Miura
3.40pm	Structural changes in liver glycogen induced by diseases	Yujun Wan
3.45pm	Update from Integrated Sciences	
3.50 – 4.15pm	Afternoon Tea	
4.15 – 5.05pm	Session 4: Polysaccharides across the domains	Chair: Edward Moh
4.15 – 4.45pm	KEYNOTE 6: The green challenge: methods to characterise the most complex polysaccharides on the planet	Jenny Mortimer
4.45 – 5.05pm	The role of glycosaminoglycans and their degrading enzymes in inflammatory cell homeostasis	Brooke Farrugia
5.05 – 6.00pm	Poster Session	
	End of Day – Free Evening	
Thursday 24th November 2022		
8.30 – 5.00pm	Registration and Exhibition Open	
9.00 – 10.45am	Session 5: Glycochemistry	Chair: Mark von Itzstein Co-chair: Oren Cooper
9.00 – 9.30am	KEYNOTE 7: Glycan arrays, diagnostics and mycobacteriophages	Todd Lowary
9.30 – 10.00am	KEYNOTE 8: Probing the effects of glycosylation on peptide and protein activity through chemical synthesis	Richard Payne
10.00 – 10.15am	Towards rapid synthesis of Heparan Sulfate mimicking oligomers through peptide chemistry	Alison Daines
10.15 – 10.30am	Understanding C-mannosylation-induced protein stabilisation through chemical protein synthesis	Ethan Goddard-Borger
10.30 – 10.45am	Synthesis of Uronic Acid 1-Azasugars as putative inhibitors of α -Iduronidase, β -Glucuronidase and Heparanase	Vito Ferro
10.45 – 10.50am	Update from AB Sciex	Jeremy Potriquet
10.45 – 11.15am	Morning Tea	
11.15 – 12.45pm	Session 6: Spatial Glycobiology – Warren Workshop Session	Chair: Joy Wolfram Co-Chair: Matthew Briggs
11.15 – 11.45pm	KEYNOTE 9: Instrument and method development towards enhanced N-Glycan Mass Spectrometry Imaging	Peter Hoffman

11.45 – 12.15pm	Highly sensitive spatial glycomics at cellular resolution by <i>in-situ</i> derivatization and mass spectrometry imaging	Arun Everest-Dass
12.15 – 12.30pm	Novel sigec targeting using multivalent sialyllactose decorated carbon dots	Oren Cooper
12.30 – 12.45pm	Enhancing glycan imaging using photocleavable mass-tagged lectins for MALDI-MSI	Lindsay Gee
12.45 – 1.45pm	Lunch including Sponsor Workshops	
12.55 – 1.35pm	Workshop - Glycomics and Beyond with Thermo Fisher Scientific	
	Using Glycoproteomics to understand microenvironment induced drug resistance in a leukaemia model	Daniel Kolarich
	Isomeric separation of complex reduced N and O glycans using PGC	Nicholas Debono
	Innovations that scale the molecular spectrum	Frank Rooney
1.45 – 3.30pm	Session 7: Microbial Glycobiology Chair: Nichollas Scott Co-Chair: Anuk Indraratna	
1.45 – 2.15pm	KEYNOTE 10: Identifying pathways of reserve carbohydrate biosynthesis in parasitic protozoa essential for virulence	Malcolm McConville
2.15 – 2.45pm	Glycosylation-dependent protein quality control in malaria parasites enables transmission to mosquitoes and subsequent liver-stage infection	Justin Boddey
2.45 – 3.00pm	Glycolipid-peptide conjugate vaccines protect against liver-stage malaria	Benjamin Compton
3.00 – 3.15pm	Treatment of invasive fungal Infections: discovery of new potential leads	Danielle Lee
3.15 – 3.30pm	A genomics-structure approach to understanding polysaccharide biosynthesis in a critical priority bacterial pathogen	Johanna Kenyon
3.30 – 4.00pm	Speed talks (3 minutes each) - Chair and Moderator: Natasha Zachara	
3.30pm	A comprehensive glycomics data repository workflow by strengthening collaboration between UniCarb-DR and GlycoPOST	Yushi Takahashi
3.33pm	Extraction conditions significantly impact the resulting proteome, glycome and glycoproteome	Pauline Dizon
3.36pm	Dual search strategy for identification of glycopeptide with multiple N- and O-glycans	Yu-Chun Chien
3.39pm	GSS: a web tool to simulate signaling pathways involving glycosylation	Koichi Arakawa
3.42pm	Development of a database of glycosylation reaction parameters, GlycoParaDB	Akane Kon
3.45pm	Characterising the glycosylated immunopeptidome by leveraging diagnostic fragment ions using a novel spectral analysis program	Joshua Fehring
3.48pm	Understanding storage associated changes in platelet components using glycomics	Jessica Halliday
3.51pm	Human cancer cells utilize various pro-adhesive ligands for endothelial adhesion in vitro	Sarah Starzonek
3.54pm	Synthesis of rare L-hexoses	Nicholas See
4.00 – 5.00pm	Afternoon Tea and Poster Session	

5.00 – 6.00pm	Annual General Meeting of the Australian Glycoscience Society	
7.00 – 9.30pm	Conference Dinner	Boatshed Bar & Grill, SeaWorld Resort
Friday 25th November 2022		
8.30 – 3.30pm	Registration and Exhibition Open	
9.00 – 10.45am	Session 8: Analytical Glycobiology – Warren Workshop Session	Chair: Morten Thaysen-Andersen Co-Chair: Rebeca Kawahara
9.00 – 9.30am	A tribute to Charles Warren	
9.30 – 9.45am	Multi-Glycomics: sequential release of the heterogeneous glycome from a single sample	Edward Moh
9.45 – 10.00am	A pain-causing and paralytic ant venom glycopeptide	Sam Robinson
10.00 – 10.15am	Glycoprofiling by lectin-based glycoprotein microarrays	Jaroslav Katrlík
10.15 – 10.30am	A harmonised compositional and structural glycomics platform for the masses	Christopher Ashwood
10.30 – 11.15 am	Morning Tea	
11.15 – 12.30 pm	Session 9: Glycobioinformatics – Warren Workshop Session	Chair: Elisa Fadda Co-Chair: Martin Frank
11.15 – 11.45am	KEYNOTE 11: Using inference on Semantic Web data to enrich the data in GlyCosmos	Kiyoko Aoki-Kinoshita
11.45 – 12.00pm	MAGMap: Liquid Chromatography Ion Mobility Mass spectrometry (LC-IM-MS) software for characterization of released glycans	Ian Walsh
12.00 – 12.15pm	Biocuration of glycosylation data	Catherine Hayes
12.15 – 12.30pm	Evaluating confidence score relationships across glycopeptide search engines via a novel glycan database and glycopeptide result converter	Matthew Campbell
12.30 – 1.30pm	Lunch	
1.30 – 3.00pm	Session 10: Translational Glycobiology	Chair: Lisa Willis Co-Chair: Julian Ugonotti
1.30 – 2.00pm	KEYNOTE 12: Engineering the lectin activity of a bacterial toxin to create a new tool for cancer diagnosis and monitoring	Michael Jennings
2.00 – 2.15pm	The application of synthetic biology to the production of O-glycosylated proteins in <i>E. coli</i>	Warren Wakarchuk
2.15 – 2.30pm	Glycopeptide reporters of early-stage colorectal cancer	Rebeca Kawahara
2.30 – 3.00pm	CLOSING LECTURE: Glycosaminoglycans that enhance mesenchymal stem cell banking	Simon Cool
3.00 – 3.30pm	Prizes and awards – Organising Committee Farewell	