

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	
3.00 pm	Bus departs SeaWorld Resort to Griffith University
3.00 – 4.00 pm	Welcome and registration
4.00 – 4.20	Opening and Welcome to Country Daniel Kolarich
4.20 – 5.15	OPENING KEYNOTE: Taming glycoconjugate structure and interactions in development and disease Mia Huang
5.15 – 5.30	Official inauguration of the Australian Glycoscience Society Morten Thaysen-Andersen
5.30 – 7.30	Welcome reception at Glycomics (includes tours of the institute)
7.45	Bus departs Griffith University to SeaWorld Resort
Wednesday 23 rd November 2022	
Location: Sea World Resort Conference Centre	
8.00 – 5.00 pm	Registration and Exhibition Open
9.00 – 10.45 am	Session 1: Clinical Glycobiology
9.00 – 9.30	KEYNOTE 1: Platelet glycans: take the bitter with the sweet Dianne von der Wal
9.30 – 10.00	KEYNOTE 2: Immunological responses against glycosylated biotherapeutics and biodevices in humans Vered Padler-Karavani
10.00 – 10.15	Polysialic acid is dysregulated in the autoimmune disease scleroderma Lisa Willis
10.15 – 10.30	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
10.30 – 10.45	Spatiotemporal glycoprofiling of resting and maturing neutrophils reveals granule- and development stage-specific N-glycosylation Julian Ugonotti
10.45 – 10.50	Update from Merck
10.50 – 11.15 am	Morning Tea
11.15 – 1.00 pm	Session 2: Discovery Glycobiology

11.15 – 11.45	KEYNOTE 3: A glyocode for the dynamics of breast cancer migration	Ramray Bhat
11.45 – 12.15	KEYNOTE 4: Identifying the Regulatory Network of O-GlcNAc-Cyclers	Natasha Zachara
12.15 – 12.30	The SARS-CoV-2 S glycan shield evolution: Implications in immune evasion and viral infection along the phylogeny and VoCs	Elisa Fadda
12.30 – 12.45	From MEMS to Carbon Dots: When Glyco meets Nano	Joe Tiralongo
12.45 – 1.00	Deciphering the role of selective N-glycosyl modification in fate biasing of melanocytes from Neural crest cells	Babita Sharma
1.00 – 2.00 pm	Lunch including sponsor workshop	
1.10 – 1.50	Workshop: Advances in Translational Glycoproteomics	Sponsored by InterVenn
2.00 – 3.15 pm	Session 3: Integrating Omics – Warren Workshop	
2.00 – 2.30	KEYNOTE 5: The glycome: The missing link in extracellular vesicle research	Joy Wolfram
2.30 – 2.45	Ultra-sensitive platelet proteome maps the O-glycosylation landscape and charts the response to thrombin dosage	Mark Larance
2.45 – 3.00	Translational Glycomedicine: Supporting the central dogma with sugar codes	Wei Wang
3.00 – 3.15	Systems biology glycoproteomics, proteomics and metabolomics to investigate beer and wine production	Ben Schulz
3.15 – 3.45 pm	Speed talks (3 minutes each)	
3.15	Examining the salivary N-glycome during experimental Streptococcus pyogenes infection	Anuk Indraratna
3.18	Hyper-truncated N -glycosylation of neutrophil azurocidin enables binding to P. aeruginosa PA-IIL (LecB)	Harry Tjondro
3.21	Distinct N-glycan signatures of cancer and immune cells from ovarian cancer ascites	Katherine Wongtrakul-Kish
3.24	Comprehensive glycoproteome profiling of resting and thrombin-activated platelets	The Huong Chau
3.27	MicroGlycoDB: a prototype database of microbial glycan-related information	Atsuto Uchino
3.30	Investigating the CASD1 enzyme as a novel therapeutic target against melanoma	Sam Heddes
3.33	Ganglioside GM3 interacts with basic amino acids just above the transmembrane domain of the insulin receptor	Kazuya Kabayama
3.37	Quantitative analysis of galectin-dependent glycoprotein dynamics in synthetic glycan chemical knock-in cells	Ayane Miura
3.40	Structural changes in liver glycogen induced by diseases	Yujun Wan
3.45	Update from Integrated Sciences	
3.50 – 4.15 pm	Afternoon Tea	
4.15 – 5.05 pm	Session 4: Polysaccharides across the domains	
4.15 – 4.45	KEYNOTE 6: The green challenge: methods to characterise the most complex polysaccharides on the planet	Jenny Mortimer
4.45 – 5.05	The role of glycosaminoglycans and their degrading enzymes in inflammatory cell homeostasis	Brooke Farrugia
5.05 – 6.00 pm	Poster Session	

	End of Day – Free Evening	
Thursday 24th November 2022		
8.30 – 5.00 pm	Registration and Exhibition Open	
9.00 – 10.45 am	Session 5: Glycochemistry	
9.00 – 9.30	KEYNOTE 7: Glycan arrays, diagnostics and mycobacteriophages	Todd Lowary
9.30 – 10.00	KEYNOTE 8: Probing the effects of glycosylation on peptide and protein activity through chemical synthesis	Richard Payne
10.00 – 10.15	Towards rapid synthesis of Heparan Sulfate mimicking oligomers through peptide chemistry	Alison Daines
10.15 – 10.30	Understanding C-mannosylation-induced protein stabilisation through chemical protein synthesis	Ethan Goddard-Borger
10.30 – 10.45	Synthesis of Uronic Acid 1-Azasugars as putative inhibitors of α -Iduronidase, β -Glucuronidase and Heparanase	Vito Ferro
10.45 – 10.50	Update from AB Sciex	Jeremy Potriquet
10.45 – 11.15 am	Morning Tea	
11.15 – 12.45 pm	Session 6: Spatial Glycobiology – Warren Workshop Session	
11.15 – 11.45	KEYNOTE 9: Instrument and method development towards enhanced N-Glycan Mass Spectrometry Imaging	Peter Hoffman
11.45 – 12.15	Highly sensitive spatial glycomics at cellular resolution by <i>in-situ</i> derivatization and mass spectrometry imaging	Arun Everest-Dass
12.15 – 12.30	Novel sigec targeting using multivalent sialyllactose decorated carbon dots	Oren Cooper
12.30 – 12.45	Enhancing glycan imaging using photocleavable mass-tagged lectins for MALDI-MSI	Lindsay Gee
12.45 – 1.45 pm	Lunch including Sponsor Workshops	
12.55 – 1.35	Workshop	Sponsored by ThermoFisher
1.45 – 3.30 pm	Session 7: Microbial Glycobiology	
1.45 – 2.15	KEYNOTE 10: Identifying pathways of reserve carbohydrate biosynthesis in parasitic protozoa essential for virulence	Malcolm McConville
2.15 – 2.45	Glycosylation-dependent protein quality control in malaria parasites enables transmission to mosquitoes and subsequent liver-stage infection	Justin Boddey
2.45 – 3.00	Glycolipid-peptide conjugate vaccines protect against liver-stage malaria	Benjamin Compton
3.00 – 3.15	Treatment of invasive fungal infections: discovery of new potential leads	Danielle Lee
3.15 – 3.30	A genomics-structure approach to understanding polysaccharide biosynthesis in a critical priority bacterial pathogen	Johanna Kenyon
3.30 – 4.00 pm	Speed talks (3 minutes each)	
3.30	A comprehensive glycomics data repository workflow by strengthening collaboration between UniCarb-DR and GlycoPOST	Yushi Takahashi

3.33	Extraction conditions significantly impact the resulting proteome, glycome and glycoproteome	Pauline Dizon
3.36	Dual search strategy for identification of glycopeptide with multiple N- and O-glycans	Yu-Chun Chien
3.39	GSS: a web tool to simulate signaling pathways involving glycosylation	Koichi Arakawa
3.42	Development of a database of glycosylation reaction parameters, GlycoParaDB	Akane Kon
3.45	Characterising the glycosylated immunopeptidome by leveraging diagnostic fragment ions using a novel spectral analysis program	Joshua Fehring
3.48	Understanding storage associated changes in platelet components using glycomics	Jessica Halliday
3.51	Human cancer cells utilize various pro-adhesive ligands for endothelial adhesion in vitro	Sarah Starzonek
3.54	Synthesis of rare L-hexoses	Nicholas See
4.00 – 5.00 pm	Afternoon Tea and Poster Session	
5.00 – 6.00 pm	Annual General Meeting of the Australian Glycoscience Society	
7.00 – 9.30 pm	Conference Dinner	
Friday 25th November 2022		
8.30 – 3.30 pm	Registration and Exhibition Open	
9.00 – 10.45 am	Session 8: Analytical Glycobiology – Warren Workshop Session	
9.00 – 9.30	A first-generation sequence of carbohydrates; GaGs and glycans	Vern Reinhold
9.30 – 09.45	Multi-Glycomics: sequential release of the heterogeneous glycome from a single sample	Edward Moh
9.45 – 10.00	A pain-causing and paralytic ant venom glycopeptide - TBC	Sam Robinson
10.00 – 10.15	Glycoprofiling by lectin-based glycoprotein microarrays	Jaroslav Katrlík
10.15 – 10.30	Evolutionary glycomics: A comprehensive study of vertebrate host serum/plasma glycome using orthogonal glycomics techniques	Abarna Murugan
10.30 – 10.45	A harmonised compositional and structural glycomics platform for the masses	Christopher Ashwood
10.45 – 11.15 am	Morning Tea	
11.15 – 12.30 pm	Session 9: Glycobioinformatics – Warren Workshop Session	
11.15 – 11.45	KEYNOTE 11: Covering the GlyCosmos of glycan-related data from microbes to human diseases and pathways	Kiyoko Aoki-Kinoshita
11.45 – 12.00	MAGMap: Liquid Chromatography Ion Mobility Mass spectrometry (LC-IM-MS) software for characterization of released glycans	Ian Walsh
12.00 – 12.15	Biocuration of glycosylation data	Catherine Hayes

12.15 – 12.30	Evaluating confidence score relationships across glycopeptide search engines via a novel glycan database and glycopeptide result converter	Matthew Campbell
12.30 – 1.30 pm	Lunch	
1.30 – 3.00 pm	Session 10: Translational Glycobiology	
1.30 – 2.00	KEYNOTE 12: Engineering the lectin activity of a bacterial toxin to create a new tool for cancer diagnosis and monitoring	Michael Jennings
2.00 – 2.15	The application of synthetic biology to the production of O-glycosylated proteins in <i>E. coli</i>	Warren Wakarchuk
2.15 – 2.30	Glycopeptide reporters of early-stage colorectal cancer	Rebeca Kawahara
2.30 – 3.00	Closing lecture:	Simon Cool
3.00 – 3.30 pm	Prizes and awards Farewell	