

Queensland Immunology Networking Symposium

Translational Research Institute, 16 – 17 October 2024

WEDNESDAY 16 OCTOBER

10.00am-10.10am Welcome and Acknowledgement of Country

SESSION 1
10.10am-11.50am **Cancer, Vaccines, and Immunotherapy**
Chairs: Isabel Courtney & Guangzu Zhao

Sponsored by Millennium Science



10.10am-10.25am **Dr Victoria Ozberk - Institute for Glycomics, Griffith University**
Targeting Conserved M-Protein and Superantigens to Combat Invasive Strep A Disease - Innovations Toward mAb Development

10.25am-10.40am **Dr Ailin Lepletier – Institute for Glycomics, Griffith University**
Peptide-Based Novel Vaccine Strategies to Combat Streptococcal Infections

10.40am-10.55am **Dr Jessica Rooke – Institute for Molecular Bioscience, The University of Queensland**
Using Genetics to Understand Salmonella Chronic Infections and Vaccine Design

10.55am-11.10am **Prof Kristen Radford - Mater Research Institute**
How Human cDC1 Dendritic Cells Interact with Tumour Cells

11.10am-11.25am **Dr Chris McMillan - School of Chemistry and Molecular Biosciences, The University of Queensland**
Understanding the Enhanced Immune Responses to Microarray Patch Vaccination Through Spatial Transcriptomics

11.25am-11.50am Questions and Discussion

11:50am-12.50pm Lunch

SESSION 2
12.50pm-2.30pm **Integrating Genomics, AI and Immunology**
Chairs: Ashton Kelly & Charles Armitage

Sponsored by BD



12:50pm-1.05pm **Prof Georgia Chenevix-Trench - QIMR Berghofer Medical Research Institute**
Using Breast Cancer Genetic Studies to Identify Genes Involved in Immunosurveillance

1.05pm-1.20pm **Dr Andrew Calcino – James Cook University**
Using Single Cell Multi-Omics to Gain Insight Into the Mechanism of Autoimmune Disease

1.20pm-1.35pm **Dr Kelvin Tuong - Child Health Research Centre, The University of Queensland**
Machine Learning for Paediatric Cancer and Beyond

1.35pm-1.50pm **Dr Jiayue-Clara Jiang – Institute for Molecular Bioscience, The University of Queensland**
Leveraging Statistical Genomics to Investigate the Anti-Depressive Potential of Statins

1.50pm-2.05pm **Dr Quan Nguyen**
Generative AI for Digital Pathology

2.05pm-2.30pm Questions and Discussion

2.30pm-3.00pm Afternoon Tea

WEDNESDAY 16 OCTOBER (CONTINUED)

**PANEL
DISCUSSION
3.00pm-4.15pm**

One Size Doesn't Fit All: The Challenge of Predicting Responders to Therapy

Sponsored by Sanofi



Chairs:

Prof Laurence Macia – Senior Translational Immunologist, Sanofi

Dr Christian Nefzger – Senior Research Fellow, UQ Institute for Molecular Bioscience

Panel:

Prof Haitham Tuffaha – Interim Director, UQ Centre for the Business and Economics of Health

A/Prof Kirsty Short – NHMRC Principal Research Fellow, UQ School of Chemistry and Molecular Biosciences

Prof Georgia Chenevix-Trench - NHMRC Investigator, QIMR Berghofer Medical Research Institute

A/Prof Fiona Simpson - NHMRC Leadership Fellow, Frazer Institute, The University of Queensland

4.15pm-4.30pm

Travel Award Presentation

5.00pm-6.30pm

Networking Event

The Tailors, Canvas Club (16 Logan Rd, Woolloongabba QLD 4102)



Sponsored by ASI

6.30pm-9.00pm

Symposium Dinner

1889 Enoteca (10-12 Logan Rd, Woolloongabba QLD 4102)

Queensland Immunology Networking Symposium

Translational Research Institute, 16 – 17 October 2024

THURSDAY 17 OCTOBER

10.00am-10.10am Welcome and Acknowledgement of Country

SESSION 3 10.10am-11.50am

Infection and Immunity

Chairs: Georgina McCallum & Harindra Sathkumara

Sponsored by Miltenyi Biotec



10.10am-10.25am

Dr Ayaho Yamamoto – Child Health Research Centre, The University of Queensland
Environmental Exposures Increasing Susceptibility to Respiratory Infections

10.25am-10.40am

Dr Helen Mostafavi - Institute for Molecular Bioscience, The University of Queensland
Mechanisms of Endothelial Dysfunction in COVID-19

10.40am-10.55am

Dr Zeeshan Chaudhry – Frazer Institute, The University of Queensland
Decoding Enduring Immunity: Transcriptional Regulation of Durable CD8+ T Cell Memory

10.55am-11.10am

Dr Hillary Vandervan - James Cook University
Non-neutralising Antibody Functions in Patients Hospitalised Early in the COVID-19 Pandemic

11.10am-11.25am

Prof Antje Blumenthal - Frazer Institute, The University of Queensland
Molecular Regulation of Innate Immune Responses

11.25am-11.50am

Questions and Discussion

11:50am-12.50pm

Lunch

SESSION 4 12.50pm-2.30pm

Allergy, Autoimmunity and Organ-Specific Disease

Chairs: Snehlata Kumari & Suchandan Sikder

12:50pm-1.05pm

A/Prof Jake Begun - Mater Research Institute
Deciphering the Immunomodulatory Function of the Microbiome in IBD

1.05pm-1.20pm

A/Prof Antiopi Varelias - QIMR Berghofer Medical Research Institute
Understanding the Relationship Between IgA and Microbial Diversity to Mitigate Gut GVHD

1.20pm-1.35pm

Dr Tharushi de Silva - Queensland University of Technology
Novel Insights to T Cell Function in Ankylosing Spondylitis

1.35pm-1.50pm

A/Prof Danica Hickey - Queensland University of Technology
Detangling the Immune Interplay in Endometriosis Progression

1.50pm-2.05pm

A/Prof Daniel Worthley - Colonoscopy Clinic, Brisbane
Engineered Bacteria to Detect Tumour DNA

2.05pm-2.30pm

Questions and Discussion

2.30pm-3.00pm

Afternoon Tea

THURSDAY 17 OCTOBER (CONTINUED)

**SESSION 5
3.00pm-4.40pm**

Inflammation and Neuroinflammation

Chairs: Daniel Butcher & Helen Mostafavi

Sponsored by United Bioresearch



3.00pm-3.15pm

Dr Samantha Dando – Queensland University of Technology

Location, Location, Location...Understanding the Immune Environments of the Brain and Eye

3.15pm-3.30pm

A/Prof Jana Vukovic – School of Biomedical Sciences, The University of Queensland

Role of IL-6 Trans-signalling in Brain Injury

3.30pm-3.45pm

A/Prof Anthony White – QIMR Berghofer Medical Research Institute

Advanced Patient-Specific Microglia Cell Modeling for Pre-Clinical Studies in Neurodegenerative Diseases

3.45pm-4.00pm

Dr Rachael Ryan - James Cook University

Box Jellyfish Venom-Induced Systemic Inflammation: An Unappreciated Feature of Irukandji Syndrome?

4.00pm-4.15pm

Prof Denise Doolan – Institute for Molecular Bioscience, The University of Queensland

EBV Proteome-Wide Profiling of Immune Responses to EBV-Associated Cancers, Diseases and Immunotherapy

4.15pm-4.40pm

Questions and Discussion

4.40pm-5.00pm

Close Meeting and Thank You

PANEL DISCUSSION

One Size Doesn't Fit All: The Challenge of Predicting Responders to Therapy

Wednesday 16 October, 3:00pm-4:15pm, Translational Research Institute

CHAIRS:

PROF LAURENCE MACIA

Senior Translational Immunologist, Sanofi



Laurence Macia obtained her PhD in 2006 at the Pasteur Institute of Lille, France, followed by postdoctoral work at the Garvan Institute and Monash University under Prof Mackay. From 2015 to 2023, she led a lab at the University of Sydney, becoming a Professor of Immunology in 2023. Her research focused on diet, gut microbiota, and immune function, and she led the Nutritional Immunometabolism node at the Charles Perkins Centre. She also served as Academic Director of Sydney Cytometry (2021-2023). In January 2024, she joined the Translational Science Hub in Brisbane as Senior Translational Immunologist at Sanofi, working on mRNA vaccines and supporting the biomedical research ecosystem by working closely with UQ and Griffith University partners.

DR CHRISTIAN NEFZGER

Senior Research Fellow, Institute for Molecular Bioscience, UQ



Dr. Christian Nefzger earned his Master's at the Technical University of Munich with training at Munich's Helmholtz Centre, completed his Ph.D. at Monash University, and conducted postdoctoral work with Prof. José Polo. Since 2019, he leads the Reprogramming and Ageing Laboratory (IMB/UQ), which investigates molecular mechanisms of cell fate transitions, focusing on ageing. The lab's research demonstrated that chromatin and transcription factor (TF) network remodeling in ageing reflects the predictable, degrading effects of a mechanism critical for development. The group studies how this remodeling affects tissues and organs and seeks translational strategies to shift aged TF networks toward more functional states.

Panel discussion sponsored by Sanofi

sanofi

PANEL DISCUSSION

One Size Doesn't Fit All: The Challenge of Predicting Responders to Therapy

Wednesday 16 October, 3:00pm-4:15pm, Translational Research Institute

PANEL:

PROF HAITHAM TUFFAHA

Interim Director, UQ Centre for the Business and Economics of Health



Professor Haitham Tuffaha is the Interim Director of the University of Queensland's Centre for the Business and Economics of Health (CBEH). He also leads Health Technology Assessment for the Centre, which involves evaluating submissions made to the Australian Government to reimburse new medicines and medical devices through the PBS and MBS. He has a particular interest in translational health economics, which is a novel approach to integrate business and health economics principles in the research and development phase and throughout the lifecycle of a health technology to bridge the gap between the decision to fund and use a new health technology in practice (the backend of translational medicine) and the decision to invest in its development (the front end of translational medicine).

A/PROF KIRSTY SHORT

NHMRC Principal Research Fellow, School of Chemistry and Molecular Biosciences, UQ



A/Prof Kirsty Short is a virologist who focuses on pandemic preparedness for respiratory virus infections, namely influenza virus and coronaviruses.

PROF GEORGIA CHENEVIX-TRENCH

Distinguished Scientist, QIMR Berghofer Medical Research Institute



Georgia Chenevix-Trench has had a long term interest in inherited cancer syndromes, identifying the gene for nevoid basal cell carcinoma syndrome back in 1996. She also identified the gene for gastric adenocarcinoma and proximal polyposis of the stomach in 2016. Chenevix-Trench is a founding member of kConFab, the Kathleen Cuninghame Foundation Consortium for research into familial breast cancer. She started the Consortium of Investigators of Modifiers of BRCA1/2, and is a founding member of the Breast Cancer Association Consortium. These consortia have identified over 200 novel breast cancer susceptibility loci since the advent of genome-wide association studies. Chenevix-Trench has published over 500 papers in peer reviewed journals. She was elected to the Australian Academy of Science in 2014.

A/PROF FIONA SIMPSON

NHMRC Leadership Fellow, Frazer Institute, UQ



Fiona completed her PhD on cellular trafficking at the University of Cambridge, UK. She was then a Wellcome Trust Prize Post-doctoral fellow at The Scripps Research Institute, La Jolla, working on trafficking and endocytosis of RTKs. Fiona is currently a Fellow of the Queensland Head and Neck Cancer Centre. The Simpson lab research program is focused directly on the translation of research findings into new cancer therapies and has generated a novel method for antibody-mediated cancer therapy and associated companion diagnostic methods which are covered by three international patents, now licenced. Fiona was the lead scientific investigator on a Phase I proof of concept study of the novel therapy in head and neck cancer (HREC/15/QPAH/48) and Phase IB dose escalation trail (CESTEM-1), now completed. Currently HER2Pro open for recruitment.

SPONSORS

Thank you to our Sponsors for their continued support:

SUPPORTING ORGANISATIONS



VENUE SPONSOR



NETWORKING SESSION SPONSOR



PLATNIUM SPONSOR



We are an innovative global healthcare company, driven by one purpose: we chase the miracles of science to improve people's lives. Our team, across some 100 countries, is dedicated to transforming the practice of medicine by working to turn the impossible into the possible. We provide potentially life-changing treatment options and life-saving vaccine protection to millions of people globally, while putting sustainability and social responsibility at the centre of our ambitions.

Scientific discoveries don't happen overnight or without hard work. But our determination to find answers for patients motivates us to develop breakthrough medicines and vaccines. And to never settle.

Learn more at [sanofi.com.au](https://www.sanofi.com.au).

SPONSORS

Thank you to our Sponsors for their support:

GOLD SPONSORS



Miltenyi Biotec is a global provider of products and services that empower biomedical discovery and advance cellular therapy. Our innovative tools support research at every level, from basic research to translational research to clinical application. This integrated portfolio enables scientists and clinicians to obtain, analyze, and utilize the cell. Our technologies offer solutions for cellular research, cell therapy, and cell manufacturing.

Our more than 30 years of expertise spans research areas including immunology, stem cell biology, neuroscience, cancer, hematology, and graft engineering. In our commitment to the scientific community, we also offer comprehensive scientific support, consultation, and expert training. Today, Miltenyi Biotec has more than 4,700 employees in 23 countries – all dedicated to helping researchers and clinicians around the world make a greater impact on science and health.

Website: www.miltenyibiotec.com



Millennium Science distributes cutting-edge instrumentation and reagents across various workflow applications including – highly accurate long and short-read sequencing, single cell gene expression, spatial transcriptions, flow cytometry, real-time PCR, next-generation automation, immunology, western blotting, cell imaging, cell analysis, biologics, cell and gene therapy.

Website: www.msscience.com.au



By partnering with United Bioresearch you will be able to access customised solutions and a knowledge bank of experienced scientists to help refine your research. Come and chat with us about the MultiPro Immune Profiling Cocktail & associated antibodies from Proteintech Genomics. Both are designed to unlock the quantification of both cell surface & intracellular proteins during single-cell RNAseq experiments.

Discover the range of over 13,000 antibodies from Proteintech. all made in-house and covered by a 100% money back guarantee, no questions asked. We also offer a comprehensive selection of Cytokines, Growth Factors, ELISA Kits and accessory products for Immunology research.

Website: www.unitedbioresearch.com.au



BD is a global medical technology company that is advancing the world of health™ by improving medical discovery, diagnostics and the delivery of care. BD leads in patient and healthcare worker safety and the technologies that enable medical research and clinical laboratories. The company provides innovative solutions that help advance medical research and genomics, enhance the diagnosis of infectious disease and cancer, improve medication management, promote infection prevention, equip surgical and interventional procedures.

Website: www.bd.com

ORGANISING COMMITTEE

Thank you to the QINS24 Organising Committee:

GABRIELLE BELZ FI-UQ

SEVERINE NAVARRO QIMRB

ANDREAS KUPZ JCU

MATTHEW SWEET IMB-UQ

DANIELLE STANISIC GU

SUMAIRA HASNAIN MRI-UQ

EMMA HAMILTON-WILLIAMS FI-UQ

SAMANTHA DANDO QUT

LARISA LABZIN IMB-UQ

JAMES CURSON IMB-UQ

Take your research to the next level.

Human Immune Model Facility (HIMF)

TRI is establishing an Australian-first capability for the generation of preclinical models with humanised immune systems. The HIMF team can provide expert advice on how human immune models can elevate your research.

Capabilities:

- Generation of cohorts of preclinical models with immune systems that faithfully replicate that of humans
- Specialised technical services
- Experimental design and consultation, including ethics support
- Ideal for testing novel immunotherapies
- Suited to preclinical studies in oncology, hematology, immunology, autoimmunity, infectious disease and inflammation

For expressions of interest, experimental, training and booking enquiries, contact: TRI-HIMFacility@tri.edu.au.

Did you know TRI also has a Gnotobiotic Model Facility? Contact corefacilities@tri.edu.au for more.

Taking orders now for fulfilment from January 2025



TRI
TRANSLATIONAL RESEARCH INSTITUTE
AUSTRALIA

AUTHORIZED DISTRIBUTOR OF
The Jackson Laboratory

TRI Advertisement



JOIN THE QIRC MAILING LIST

Don't miss out the latest news and opportunities from QIRC

Anyone interested in Queensland immunology research and events is welcome to sign up for the QIRC mailing list.

Along with QIRC announcements, you'll receive the monthly QIRC Update newsletter, which will feature:

- **QIRC Events:** Be the first to know about upcoming seminars, conferences, and workshops hosted by QIRC.
- **QIRC Funding Opportunities:** Stay updated on the latest QIRC awards and seed grants available.
- **Member News:** Celebrate the achievements and milestones of QIRC members and recipients of QIRC funding awards.
- **Community Events:** Discover both local and global immunology-related events organised by QIRC members.

[Sign up on the QIRC website.](#)

The QIRC will be offering up to **five seed grants valued at \$25,000** for collaborative projects between QIMR Berghofer & UQ in 2025.

Two grants will be available exclusively to Early-Career Researchers.

Applications to open soon.

Be on the mailing list to not miss the announcement.

Join the conversation online with

#QINS24



Connect with the Queensland Immunology Research Centre:

in Queensland Immunology Research Centre **X** @QLDimmunology

qirc.com.au

