

Monday, 11th July Australian Society for Microbiology Annual Scientific Meeting 2022

Days

Monday, 11th July (/days/2022-07-11)

Tuesday, 12th July (/days/2022-07-12)

Wednesday, 13th July (/days/2022-07-13)

Thursday, 14th July (/days/2022-07-14)

Friday, 15th July (/days/2022-07-15)

Search

Speakers (/speakers)

Illumina Workshop

🕒 1:00PM - 2:30PM

📅 Monday, 11th July

📍 Cockle Bay Rooms

Over the past two decades, significant gains have been made in human microbiome research, driven by advancements in next-generation sequencing technologies. The discoveries transformed our understanding of the human microbiome's composition, function, and complex dynamics. However, as the field of microbiome science evolves, there is an increasing need to improve the robustness and reproducibility of microbiome research. In this workshop, you will learn from experienced researchers as they outline the best practices in designing and conducting microbiome analyses.

A light lunch will be served from 12:30pm.

Public Lecture

🕒 3:00PM - 4:00PM

📅 Monday, 11th July

📍 Australian National Maritime Museum

👤 Chair: Thomas Jeffries

A sea of microbes in a changing global ocean (/days/2022-07-11/abstract/82056) - **Justin Seymour** (/speaker/423247)

Why do some bacteria become pathogens for humans? (/days/2022-07-11/abstract/83047) - **Diane McDougald** (/speaker/428937)

Welcome & Awards Ceremony

🕒 4:30PM - 5:00PM
📅 Monday, 11th July
📍 Cockle Bay Rooms

Distinguished Award Oration

🕒 5:00PM - 5:45PM
📅 Monday, 11th July
📍 Cockle Bay Rooms
👤 Chair: Dena Lyras

Bacterial effector proteins: messengers of virulence (/days/2022-07-11/abstract/83049) - **Elizabeth Hartland** (/speaker/428939)

Snowdon Lecture

🕒 5:45PM - 6:30PM
📅 Monday, 11th July
📍 Cockle Bay Rooms
👤 Chair: Dena Lyras

Systems approaches to understanding and control of TB in man and animals (/days/2022-07-11/abstract/83050) - **Johnjoe McFadden** (/speaker/428940)

Welcome Function & Poster Session I

🕒 6:30PM - 8:30PM
📅 Monday, 11th July
📍 The Gallery

Analysis of resistance of *Staphylococcus aureus* ocular strains from USA and Australia (/days/2022-07-11/abstract/82399) - **Madeeha Afzal** (/speaker/424977)

ER stress restricts *Legionella pneumophila* replication in human macrophages. (/days/2022-07-11/abstract/82603) - **Manal H. Alshareef** (/speaker/426634)

Origin of the *oxa235* carbapenem resistance gene found in transposon Tn6252 (/days/2022-07-11/abstract/82413) - **Stephanie J Ambrose** (/speaker/425054)

Developing an on-farm protocol for a suspected *Chlamydia psittaci* foal loss (/days/2022-07-11/abstract/82423) - **Susan I Anstey** (/speaker/425105)

Long-read sequencing technology for natural product gene discovery in Antarctic desert soil *Actinobacteriota* (/days/2022-07-11/abstract/82377) - **Nicole Benaud** (/speaker/425032)

Unbiased analysis of Australian and International *Xanthomonas campestris* isolate genomes reveals novel host specificity and potential pathogenesis associated genes. (/days/2022-07-11/abstract/82622) - **Daniel Bogema** (/speaker/426778)

Development of a microbial therapeutic to prevent systemic *Candida albicans* infections arising from the gastrointestinal tract (/days/2022-07-11/abstract/82209) - **Bianca Briscas** (/speaker/423983)

The diversity, conservation, and potential multifunctionality of archaeal tubulins (/days/2022-07-11/abstract/82376) - **Hannah J Brown** (/speaker/424847)

The hills are alive an exploration of a unique Antarctic microbial community (/days/2022-07-11/abstract/82501) - **Devan Chelliah** (/speaker/425542)

Characterizing mannose-binding gonococcal proteins (/days/2022-07-11/abstract/82584) - **Xiaofan Chen** (/speaker/426427)

An ArdC homologue protects staphylococcal conjugative plasmids during conjugation between clonal complexes (/days/2022-07-11/abstract/82577) - **Amy Davis** (/speaker/426489)

Co-culture and cross-feeding dynamics of co-isolated clinical strains of *Acinetobacter baumannii* and *Klebsiella pneumoniae* (/days/2022-07-11/abstract/82410) - **Catherine J Dawson** (/speaker/425057)

Contribution of *Mycobacterium tuberculosis* Protein PPE19 to Virulence (/days/2022-07-11/abstract/82415) - **Christopher J De Voss** (/speaker/425050)

Exploring resistance to antibiotic combinations in *A. baumannii* (/days/2022-07-11/abstract/82600) - **Natasha Delgado** (/speaker/426532)

Impact of brief exposure to lysozyme on adhesion traits and hemolysin production of oral *Candida dubliniensis* and *Candida albicans* isolates (/days/2022-07-11/abstract/81938) - **Arjuna N Ellepola** (/speaker/422634)

Characterisation of vaccine-induced antibodies to *Neisseria gonorrhoeae* (/days/2022-07-11/abstract/82794) - **Sharareh (Sherry) Eskandari** (/speaker/427892)

The effect of chemotherapy on the human virome (/days/2022-07-11/abstract/82619) - **Sarah Giles** (/speaker/426756)

Epidermal microbiomes of leopard sharks (*Triakis semifasciata*) are consistent across captive and wild environments (/days/2022-07-11/abstract/82254) - **Asha Z Goodman** (/speaker/424191)

Examination of the interaction of autophagy and antibiotics in *staphylococcus aureus* persistent infection of osteocytes. (/days/2022-07-11/abstract/82639) - **Nicholas J**

Gunn (/speaker/426868)

Variation in prophage concentrations throughout the human body. (/days/2022-07-11/abstract/82659) - **Laura K Inglis** (/speaker/426969)

Enrichment of valuable omega-3 fatty acids from indigenous microalgae by enzyme enabled nano systems (/days/2022-07-11/abstract/82811) - **Priyanshu Jain** (/speaker/431460)

Development and evaluation of a novel Multiple Cross Displacement Amplification assay for detection of toxigenic *Clostridioides difficile* as a Point-of-care testing (/days/2022-07-11/abstract/82391) - **Dazhi Jin** (/speaker/424940)

Pathogens of biosecurity significance detected in wild Australian kingfishers, parrots, pigeons and raptors. (/days/2022-07-11/abstract/82534) - **Vasilli Kasimov** (/speaker/425968)

MGTdb: A web service and database for studying the global and local genomic epidemiology of bacterial pathogens (/days/2022-07-11/abstract/82375) - **Sandeep Kaur** (/speaker/424828)

Stingray epidermal microbiomes are species-specific, but have local variation (/days/2022-07-11/abstract/81815) - **Emma Kerr** (/speaker/422170)

Sensitivity of *Pseudomonas aeruginosa* ocular isolates to bacteriophages (/days/2022-07-11/abstract/82403) - **Mahjabeen Khan** (/speaker/424995)

Analysis of Clinical Chemistry Results and Clinical Symptoms of Covid-19 Patients (/days/2022-07-11/abstract/82378) - **Seok Ryun Kwon** (/speaker/424849)

Are *Midichloria mitochondrii* providing 'the force' to *Ixodes* ticks? (/days/2022-07-11/abstract/82587) - **Laurene Leclerc** (/speaker/426392)

Clinical performance of GeneFinder COVID-19 Ag Plus Rapid Test for detection of SARS-CoV-2 (/days/2022-07-11/abstract/82318) - **Hyunjae Lee** (/speaker/424573)

Molecular mechanisms underpinning intraspecies co-infections with multiple *Acinetobacter baumannii* strains (/days/2022-07-11/abstract/82528) - **Hannah Lott** (/speaker/426169)

Genomic epidemiology of *Vibrio cholerae* O139 in Zhejiang, China, 1994-2018 (/days/2022-07-11/abstract/81991) - **Yun Luo** (/speaker/422946)

The alternative sigma factor, SigX, acts as a gate keeper for general stress response and DNA damage protection in *Acinetobacter baumannii* (/days/2022-07-11/abstract/82127) - **Ram Maharjan** (/speaker/423573)

The role of primary amines in promoting β -lactam uptake (/days/2022-07-11/abstract/82329) - **Claire Maher** (/speaker/424612)

An Algorithm for Using MALDI-TOF for the Identification of Haemolytic Streptococci (/days/2022-07-11/abstract/82114) - **Caitlin McCague** (/speaker/423507)

Controlling *Campylobacter* spp on chicken meat using plasma activated water (/days/2022-07-11/abstract/82617) - **Andrea R McWhorter** (/speaker/426725)

Regulatory mRNA-mRNA interactions are prevalent and coordinate gene expression in methicillin-resistant *Staphylococcus aureus* (/days/2022-07-11/abstract/82520) - **Daniel G Mediati** (/speaker/425672)

The untapped diversity of viruses discovered in tuna transcriptomes (/days/2022-07-11/abstract/82261) - **Lewis K Mercer** (/speaker/424957)

Screening of immunocompromised population for *Strongyloides stercoralis* by polymerase chain reaction and enzyme-linked immunosorbent assay (/days/2022-07-11/abstract/82146) - **Abhishek Mewara** (/speaker/423645)

Acute *Clostridioides difficile* gastrointestinal infection induces systemic disease symptoms, in a toxin and time dependent manner (/days/2022-07-11/abstract/82515) - **Steven Mileto** (/speaker/425642)

The intersection of genotype and phenotype to inform ecotype development (/days/2022-07-11/abstract/82422) - **Bhavya Nalagampalli Papudeshi** (/speaker/425108)

Tuesday → (/days/2022-07-12)

Tuesday, 12th July Australian Society for Microbiology Annual Scientific Meeting 2022

Days

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Nancy Millis Student Breakfast

🕒 7:30AM - 8:45AM

📅 Tuesday, 12th July

📍 Meeting Room E3.1 & E3.2

Host-Pathogen Interactions 1

🕒 9:00AM - 10:30AM

📅 Tuesday, 12th July

📍 Cockle Bay Rooms

👤 Chairs: Ana Traven & Cristina Giogha

Capturing *Legionella* effectors that target the host epitranscriptome (/days/2022-07-12/abstract/82210) - **Kitty McCaffrey** (/speaker/423987)

Available soon (/days/2022-07-12/abstract/83026) - **Glen Ulett** (/speaker/428894)

An unexpected link between *Clostridioides difficile* sporulation and antibiotic resistance (/days/2022-07-12/abstract/82095) - **Yogitha N Srikhanta** (/speaker/423377)

Targeting of microvillus protein Eps8 by the NleH effector kinases from enteropathogenic *E. coli* (/days/2022-07-12/abstract/82778) - **Cristina Giogha** (/speaker/427783)

Dynamic localisation of DamX regulates bacterial filamentation and division during UPEC dispersal from host cells (/days/2022-07-12/abstract/81818) - **Bill Söderström** (/speaker/422198)

'Metabolic upcycling' – insights into the metabolic underpinning of *Haemophilus influenzae* persistence in human airways (/days/2022-07-12/abstract/82558) - **Ulrike Kappler** (/speaker/426176)

Public Health

🕒 9:00AM - 10:30AM

📅 Tuesday, 12th July

📍 Meeting Room C3.4

👤 Chairs: John Ferguson & David Gordon

Where are we on the road towards hepatitis B cure? (/days/2022-07-12/abstract/82493) - **Peter Revill** (/speaker/425527)

Furthering epidemiological knowledge of paediatric RSV through record linkage (/days/2022-07-12/abstract/81968) - **Hannah C Moore** (/speaker/422826)

Development of diagnostic microbiology and quality management in Papua New Guinea (/days/2022-07-12/abstract/82188) - **John K Ferguson** (/speaker/423901)

A pilot study of meningococcal carriage among Aboriginal and Torres Strait Islander people in the Pilbara: implications for future studies. (/days/2022-07-12/abstract/82442) - **August Mikucki** (/speaker/425240)

A longitudinal genomic survey of invasive pneumococcal serotype 3 disease in Australia (/days/2022-07-12/abstract/82267) - **Shona Chandra** (/speaker/425516)

A changing landscape of *Neisseria gonorrhoeae* genotypes; rise of the susceptible clones? (/days/2022-07-12/abstract/80902) - **Ella Trembizki** (/speaker/426880)

Veterinary Microbiology

🕒 9:00AM - 10:30AM

📅 Tuesday, 12th July

📍 Meeting Room C3.5

👤 Chairs: Martina Jelocnik & Gary Muscatello

Nemabiome metabarcoding for identity and drug-resistance: gastrointestinal worms matter (/days/2022-07-12/abstract/82592) - **Jan Slapeta** (/speaker/426452)

Zoonotic hookworms – not just a cause of cutaneous larva migrans (/days/2022-07-12/abstract/83040) - **Rebecca Traub** (/speaker/428908)

Phasevarions in bacterial veterinary pathogens: a gambling strategy to generate diversity (/days/2022-07-12/abstract/83041) - **John Attack** (/speaker/435276)

Dust infection model for *Salmonella* Typhimurium infection in poultry (/days/2022-07-12/abstract/82498) - **Samiullah Khan** (/speaker/425535)

Geographical variation in antimicrobial resistance patterns of bacteria isolated from canine skin and ear samples in Queensland (/days/2022-07-12/abstract/82536) - **Sara Horsman** (/speaker/425978)

Whole-genome sequencing of Australian equine and avian *Chlamydia psittaci* strains: One clone to rule them all? (/days/2022-07-12/abstract/82407) - **Rhys T White** (/speaker/425012)

Marine Microbiology

🕒 9:00AM - 10:30AM

📅 Tuesday, 12th July

📍 Meeting Room C3.6

👤 Chairs: Michelle Moffitt & Anusuya Willis

Lighting up the dark - microbial dark matter matters in mats (/days/2022-07-12/abstract/82506) - **Brendan P Burns** (/speaker/425581)

Microbes and Viromes of sharks and rays (/days/2022-07-12/abstract/82562) - **Elizabeth Dinsdale** (/speaker/426345)

Genomic divergence powers the diversity of microbial photosymbionts in coral reefs (/days/2022-07-12/abstract/83022) - **Cheong Xin Chan** (/speaker/428890)

Emergent community architecture despite distinct diversity in the global whale shark epidermal microbiome (/days/2022-07-12/abstract/82537) - **Michael P Doane** (/speaker/426033)

Asgardians of the Galaxy: Cultivation of Eukaryotic-Like Archaea (/days/2022-07-12/abstract/82516) - **Fraser I MacLeod** (/speaker/425635)

Molecular hydrogen is an overlooked energy source for marine bacteria (/days/2022-07-12/abstract/82381) - **Rachael Lappan** (/speaker/424855)

Morning Tea

🕒 10:30AM - 11:00AM

📅 Tuesday, 12th July

📍 The Gallery

Plenary Session

🕒 11:00AM - 12:30PM

📅 Tuesday, 12th July

📍 Cockle Bay Rooms

🔑 Chairs: Megan Lenardon & Peter Revill

Battle to the end: how metabolic competition shapes host-pathogen interactions in infections (/days/2022-07-12/abstract/83018) - **Ana Traven** (/speaker/428888)

Lessons Unlearned in Pandemic Response (/days/2022-07-12/abstract/83052) - **Craig Spencer** (/speaker/428957)

Lunch

🕒 12:30PM - 2:00PM

📅 Tuesday, 12th July

📍 The Gallery

Nancy Millis Student & ECR Lunch

🕒 12:30PM - 2:00PM

📅 Tuesday, 12th July

📍 Meeting Room E3.1 & E3.2

Nancy Millis Student Awards

🕒 2:00PM - 3:30PM

📅 Tuesday, 12th July

📍 Cockle Bay Rooms

🔑 Chair: Cheryl Power

Are all plumbing materials created equally? Antimicrobial activity of brass versus stainless steel against opportunistic premise plumbing pathogens (/days/2022-07-12/abstract/81995) - **Claire Hayward** (/speaker/422959)

Inhibition of an Acid-Sensing Two-Component Regulatory System as a Novel Therapeutic Strategy for Tuberculosis (/days/2022-07-12/abstract/82418) - **Miljan Stupar** (/speaker/425063)

N-acetyl- β -hexosaminidase is important for chitooligosaccharide metabolism and biofilm formation in *Burkholderia pseudomallei* (/days/2022-07-12/abstract/82200) - **Clare L Moran** (/speaker/423960)

The Antibacterial Power of Plasma-Activated Water (/days/2022-07-12/abstract/82372) - **Joanna G Rothwell** (/speaker/425627)

Last-line antimicrobial resistance in vancomycin-resistant *Enterococcus faecium* is an unintended consequence of rifamycin antibiotic use (/days/2022-07-12/abstract/83060) - **Adrianna Turner** (/speaker/429017)

Afternoon Tea

🕒 3:30PM - 4:00PM

📅 Tuesday, 12th July

📍 The Gallery

Molecular Virology

🕒 4:00PM - 5:30PM

📅 Tuesday, 12th July

📍 Cockle Bay Rooms

👤 Chairs: Timothy Newsome & Rebecca Rockett

High throughput single cell analysis of vaccinia virus replication (/days/2022-07-12/abstract/82781) - **Timothy P Newsome** (/speaker/427799)

GENOMICS TO PHENOTYPE – Functional Genomics Provides Evidence Based Public Health (/days/2022-07-12/abstract/82647) - **Rebecca J Rockett** (/speaker/426903)

Tracking COVID-19 in New Zealand using genomics (/days/2022-07-12/abstract/82085) - **Jemma L Geoghegan** (/speaker/423331)

Patterns of within-host variation of SARS-CoV-2 (/days/2022-07-12/abstract/82387) - **Jessica E Agius** (/speaker/424891)

Mining bat transcriptomes: can we find the next pandemic virus? (/days/2022-07-12/abstract/82427) - **Tanu Sridhar** (/speaker/425135)

Assessing the fitness of a dual-antiviral drug resistant human influenza virus in the ferret model. (/days/2022-07-12/abstract/82112) - **Harry Stannard** (/speaker/423494)

Mobile Genetic Elements

🕒 4:00PM - 5:30PM

📅 Tuesday, 12th July

📍 Meeting Room C3.4

👤 Chairs: Slade Jensen & Sally Partridge

The life and death of *Starship* transposable elements in fungi (/days/2022-07-12/abstract/83027) - **Alexander Idnurm** (/speaker/428895)

Discovery of integrons in Archaea: platforms for cross-domain gene transfer (/days/2022-07-12/abstract/82015) - **Sasha Tetu** (/speaker/423050)

The *dif* module mobile element system of *Acinetobacter* species; role in spreading antibiotic resistance and environmental survival genes. (/days/2022-07-12/abstract/82325) - **Ruth M. Hall** (/speaker/424601)

Recipient cell surface structures modulate the outcome of gene transfer by bacterial conjugation. (/days/2022-07-12/abstract/80904) - **Galain C Williams** (/speaker/417285)

Conjugation efficient hybrid interference plasmids to cure target antibiotic resistance plasmids *in vivo* (/days/2022-07-12/abstract/82390) - **Muhammad Kamruzzaman** (/speaker/424901)

Sequencing of *Acinetobacter baumannii* isolate MRSN56 reveals a novel route to antibiotic resistance via IS26-mediated gene amplification (/days/2022-07-12/abstract/82301) - **Christopher J Harmer** (/speaker/424385)

Antimicrobial Targets

🕒 4:00PM - 5:30PM

📅 Tuesday, 12th July

📍 Meeting Room C3.5

👤 Chairs: Julianne Djordjevic & Adele Lehane

Sponsored by:

A drug candidate for Alzheimer's and Huntington's disease, PBT2, can be repurposed to render *Neisseria gonorrhoeae* susceptible to cationic antimicrobial peptides. (/days/2022-07-12/abstract/82527) - **Freda Jen** (/speaker/425880)

Combatting bacterial antimicrobial resistance through new antibiotics that target multidrug resistant microbes (/days/2022-07-12/abstract/82625) - **Henrietta Venter** (/speaker/426798)

Host-dependent resistance of Group A *Streptococcus* to folate pathway antibiotics (/days/2022-07-12/abstract/82351) - **Tim Barnett** (/speaker/424726)

The critical role of dietary lipids during bacterial infection and their impact on antibiotic treatment (/days/2022-07-12/abstract/83031) - **Bart Eijkelkamp** (/speaker/428899)

Defects in DNA double-strand break repair re-sensitise antibiotic-resistant *Escherichia coli* to multiple bactericidal antibiotics (/days/2022-07-12/abstract/82628) - **Sarah Revitt-Mills** (/speaker/426830)

Development of broad-spectrum antivirals for positive-sense RNA viruses using *in silico* methods (/days/2022-07-12/abstract/82327) - **Grace JH Yan** (/speaker/424608)

Biofilms

🕒 4:00PM - 5:30PM

📅 Tuesday, 12th July

📍 Meeting Room C3.6

👤 Chairs: Scott Rice & Luke Allsopp

Axes of Microbial Pathogenesis - *Helicobacter pylori* and Parkinson's disease (/days/2022-07-12/abstract/81966) - **Jim Manos** (/speaker/422791)

When lightning strikes water: Cold plasma technology to fight antibiotic-resistant bacteria and biofilms (/days/2022-07-12/abstract/82541) - **Katharina Richter** (/speaker/425983)

Novel perspectives on biofilms as diversity incubators in the microbial world. (/days/2022-07-12/abstract/82374) - **Anahit Penesyan** (/speaker/424824)

Disarming *Proteus mirabilis* and blowing its cover: N acetylcysteine inhibits *P. mirabilis* urease activity and prevents catheter encrustation due to biofilm formation in catheter-associated UTIs (/days/2022-07-12/abstract/82190) - **Arthika Manoharan** (/speaker/423910)

Efficacy of a metal chelator as antibacterial agent against staphylococci biofilms (/days/2022-07-12/abstract/82315) - **Laurine Kaul** (/speaker/424560)

The cyclophilin, PpiA, is involved in motility, biofilm formation and polyhydroxybutyrate production in *Burkholderia pseudomallei* (/days/2022-07-12/abstract/82429) - **Nicole M Bzdyl** (/speaker/425142)

Break

🕒 5:30PM - 5:45PM

📅 Tuesday, 12th July

Award Lectures

🕒 5:45PM - 7:15PM

📅 Tuesday, 12th July

📍 Cockle Bay Rooms

👤 Chair: Kate Seib

Guanylate-binding proteins (GBPs) provide a host-inspired roadmap for the design of synthetic antimicrobial peptides (/days/2022-07-12/abstract/82439) - **Daniel Enosi Tuipulotu** (/speaker/425225)

The Persistence of Microbes: uncovering microbial survival strategies through metagenomics (/days/2022-07-12/abstract/84015) - **Rachael Lappan** (/speaker/435437)

Down the helix: a molecular journey through antimicrobial resistance (/days/2022-07-12/abstract/84120) - **Amy Cain** (/speaker/435729)

Shining a light on regulatory RNA function in bacterial pathogens (/days/2022-07-12/abstract/84150) - **Jai Tree** (/speaker/435970)

The Ins and Outs of Gram-negative Cell Envelopes (/days/2022-07-12/abstract/82772) - **Karl Hassan** (/speaker/427754)

Poster Session II and 'Trade Night'

🕒 7:15PM - 8:45PM

📅 Tuesday, 12th July

📍 The Gallery

Detection and characterization of *Legionella pneumophila* associated free-living amoebae from engineered water systems (/days/2022-07-12/abstract/82265) - **Muhammad Atif Nisar** (/speaker/424237)

Skeletons out of the closet: evolution of the dynamic cytoskeleton unveiled by the Asgard Archaea lineage (/days/2022-07-12/abstract/82419) - **Stephanie-Jane Nobs** (/speaker/425091)

IL-18R-dependent protection against bacterial pneumonia by epithelial cells (/days/2022-07-12/abstract/82632) - **Lara Oberkircher** (/speaker/426816)

Light and fast – high-throughput UV-Visible method for assessing antimicrobial activity (/days/2022-07-12/abstract/82664) - **Rebecca Orrell-Trigg** (/speaker/427003)

Analysing The Impact Of pH On The Human Faecal Virome Cultivated in Mini-Bioreactors (/days/2022-07-12/abstract/82394) - **Evan J Pargin** (/speaker/424930)

A flexible, standardised, genomic nomenclature for *Bordetella pertussis* using multilevel genome typing (MGT). (/days/2022-07-12/abstract/82313) - **Michael Payne** (/speaker/424564)

GraphSNP: Using a graph approach to investigate outbreak cluster and transmission in a web browser (/days/2022-07-12/abstract/82638) - **Budi Permana** (/speaker/426840)

Indirect regulation of the glutamine transporter GlnPQ by cyclic-di-AMP affects cefuroxime resistance in *Lactococcus lactis* (/days/2022-07-12/abstract/83087) - **Huong Pham** (/speaker/429136)

A fluorescent *Pseudomonas* sp. can utilise ferric phytate as a sole phosphorus source and improve *Triticum aestivum* phosphorus uptake from sodium phytate. (/days/2022-07-12/abstract/82502) - **Carl Pille** (/speaker/425559)

Evolutionary defences of Bacteroides and how phages overcome them. (/days/2022-07-12/abstract/82669) - **Will Plewa** (/speaker/427030)

Characterisation of a hybrid histidine kinase controlling acetate transport and metabolism in *Acinetobacter baumannii* (/days/2022-07-12/abstract/82634) - **Alaska Pokhrel** (/speaker/426825)

A novel, *in vitro* model to study the effects of human GI microbiota on *Candida albicans* (/days/2022-07-12/abstract/82196) - **Matthew Prokop** (/speaker/423936)

Development of point-of-care test for hepatitis B virus (HBV) infection. (/days/2022-07-12/abstract/82602) - **Rayid K. Qasim** (/speaker/426720)

Wastewater-based monitoring reveals geospatial-temporal trends for antibiotic-resistant bacterial pathogens in Sydney, Australia, from 2017 to 2019 (/days/2022-07-12/abstract/82152) - **Zillur Rahman** (/speaker/423766)

Genomic characterization of extended-spectrum beta-lactamase-producing and carbapenem-resistant Enterobacteriaceae isolated from urban Wastewater (/days/2022-07-12/abstract/82286) - **Zillur Rahman** (/speaker/424291)

Bioaccessibility of *Lactobacillus acidophilus* LA-5 does not vary with the type of carrier milk matrices (/days/2022-07-12/abstract/82626) - **Senaka Ranadheera** (/speaker/426796)

Characterization of microbiome composition of *Acanthamoeba* isolates recovered from clinical and environmental samples (/days/2022-07-12/abstract/82441) - **Binod Rayamajhee** (/speaker/425233)

Investigating the effects of salinity on wheat plant-soil microbiomes (/days/2022-07-12/abstract/82521) - **Dante Romeo** (/speaker/425668)

The effects of glucose on microbial spoilage of vacuum-packed lamb (/days/2022-07-12/abstract/82437) - **Laura Rood** (/speaker/425206)

Comparison of minimum inhibitory concentrations by Etest® and broth microdilution for *Granulicatella* and *Abiotrophia* spp. (/days/2022-07-12/abstract/82444) - **Lamali Sadeesh Kumar** (/speaker/425252)

A probabilistic model to assess the risk of listeriosis from paneer consumption: initial framework, scenario analysis and risk estimates for Australia (/days/2022-07-12/abstract/82251) - **Dipon Sarkar** (/speaker/424181)

Structure-function studies of CetZ tubulin-like cytoskeletal protein from haloarchaea (/days/2022-07-12/abstract/82564) - **Vinaya Shinde** (/speaker/426275)

Insertion of *bla*_{CTX-M-15} within a phage-inducible chromosomal island in *Shigella flexneri* serotype 6 (/days/2022-07-12/abstract/82571) - **Eby M Sim** (/speaker/426282)

Whale shark skin microbiome are stable across size and sex, but vary over days (/days/2022-07-12/abstract/81666) - **Amber Skye** (/speaker/421172)

ESBL and MRSA carriage rates in Timor-Leste: a hospital based surveillance study. (/days/2022-07-12/abstract/82342) - **Jessie C Spargo** (/speaker/424670)

News ways that pathogenic bacteria resist killing by zinc or copper (/days/2022-07-12/abstract/82332) - **Matthew J Sullivan** (/speaker/424619)

Towards the Development of Novel Intelligent Antibacterial Coatings (/days/2022-07-12/abstract/82355) - **Tahnim TS Sultana** (/speaker/425095)

Co-occurrence of non-*Saccharomyces* yeast in the natural fermentation of palm wine in Indonesia (/days/2022-07-12/abstract/82818) - **I Nyoman Sumerta** (/speaker/428047)

Turning the spotlight on persisters: investigation of intracellular pH and redox activity of *Escherichia coli* antibiotic persisters with fluorescence-activated cell sorting (/days/2022-07-12/abstract/81992) - **Joanna Urbaniec** (/speaker/422970)

The hidden world of Antarctic *Streptomyces* (/days/2022-07-12/abstract/82576) - **Jordan Vink** (/speaker/426353)

Investigation of Australian *Erysipelothrix rhusiopathiae* reveals the diversity of Australian isolates compared to rest of the world (/days/2022-07-12/abstract/82612) - **John Webster** (/speaker/426647)

The complete genome sequence of five *Escherichia coli* sequence type (ST)1193 strains provides detailed insight into a contemporary pathogen (/days/2022-07-12/abstract/82382) - **Rhys T White** (/speaker/424873)

Regulation of conjugation in *Escherichia coli* involves a complex interaction between plasmid-borne factors and host-encoded factors (/days/2022-07-12/abstract/82402) -

Alma Wu (/speaker/424991)

The Commercial Herbicide Florasulam is a Drug-Lead for Tuberculosis Treatment (

/days/2022-07-12/abstract/82417) - **Shun Jie Wun** (/speaker/425068)

Inactivation of Jag enhances osmotic resistance in *Lactococcus lactis* (/days/2022-07-

12/abstract/83088) - **Yuwei Xiang** (/speaker/429138)

Evaluating the effectivity of treatment options for intracellular *S. aureus* infections in

osteomyelitis (/days/2022-07-12/abstract/82599) - **Anja Zelmer** (/speaker/426459)

Vancomycin Fluorescent Probes: Tools to Study Mechanisms of Antibiotic Action and

Bacterial Membrane Damage (/days/2022-07-12/abstract/82815) - **Bing Zhang**

(/speaker/428028)

Phage defence and Shiga toxin production in enterohaemorrhagic *E. coli* (/days/2022-07-

12/abstract/82591) - **Pranita Poudyal** (/speaker/426421)

Virtual Poster Session

🕒 7:15PM - 8:45PM

📅 Tuesday, 12th July

Lysins as promising therapeutics against Uropathogenic *Escherichia coli* (/days/2022-07-

12/abstract/82284) - **Syed Ahmed** (/speaker/424307)

Gut Microbiota in Diabetes (/days/2022-07-12/abstract/82618) - **Serena Chong**

(/speaker/426736)

Exploring bacterial contamination in water play parks and the associated potential public

health risks (/days/2022-07-12/abstract/82488) - **Lauren Cullinan** (/speaker/425504)

Identification of putative substrate-binding pockets of the QacA multidrug

resistance protein: Incentivising the rational development of efflux pump inhibitors (

/days/2022-07-12/abstract/82579) - **Abolfazl Dashtbani-Roozbehani** (/speaker/426699)

New frontier in the antimicrobial world? Whole plant extracts with antibiofilm activity (

/days/2022-07-12/abstract/82491) - **Cathrina Geldard** (/speaker/426115)

Exposure to puroidoline-based peptides confers transient resistance in *Acinetobacter*

baumannii and *Pseudomonas aeruginosa* (/days/2022-07-12/abstract/80488) - **Maryam MG**

Ghahri (/speaker/413845)

In Situ Structures of Bacterial Toxin Delivery Systems by Electron Cryotomography (

/days/2022-07-12/abstract/82093) - **Debnath Ghosal** (/speaker/423355)

The evaluation of *Azotobacter vinelandii* in continuous culture (/days/2022-07-

12/abstract/82256) - **Srinivasan Jayashree** (/speaker/424197)

Dissecting *Listeria monocytogenes* persistent contamination in a retail market using whole-

genome sequencing (/days/2022-07-12/abstract/82585) - **Lijuan Luo** (/speaker/426380)

Understanding toxic cyanobacterial bloom dynamics through proteogenomics (/days/2022-07-12/abstract/82629) - **Daniel Nebauer** (/speaker/426806)

The journey to rapid antibiotic resistance detection in *Mycobacterium tuberculosis* with direct sequencing of sputum samples: the benefits, the precautions, and the solution (/days/2022-07-12/abstract/82089) - **Ting Leung Timothy Mr Ng** (/speaker/423339)

Density and diversity of Strep A *emm*-types to inform sore throat and skin sore epidemiology and transmission (/days/2022-07-12/abstract/82533) - **Janessa Pickering** (/speaker/425960)

Microcystis ecotype emergence within wastewater treatment ponds (/days/2022-07-12/abstract/82598) - **Caitlin Romanis** (/speaker/426472)

A synthetic antifungal peptide mimic kills *Candida albicans* by targeting protein glycosylation and synergistically prevents infection (/days/2022-07-12/abstract/81975) - **Sebastian Schaefer** (/speaker/422877)

Rapid molecular diagnostics for extensively drug-resistant *Salmonella* Typhi (/days/2022-07-12/abstract/82775) - **Jacob Tickner** (/speaker/427759)

qPCR enhances detection of Strep A in skin and throat specimens from children at higher risk of disease (/days/2022-07-12/abstract/82645) - **Bernadette Wong** (/speaker/426896)

← Monday (/days/2022-07-11)

Wednesday → (/days/2022-07-13)

Wednesday, 13th July Australian Society for Microbiology Annual Scientific Meeting 2022

Days

Monday, 11th July (/days/2022-07-11)

Tuesday, 12th July (/days/2022-07-12)

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Speakers (/speakers)

Vaccine and Therapeutic Development

🕒 9:00AM - 10:30AM

📅 Wednesday, 13th July

📍 Cockle Bay Rooms

👤 Chair: Tania Sorrell AM

DEVELOPMENT OF A HUMAN NEONATAL ROTAVIRUS VACCINE (RV3-BB) TO TARGET PROTECTION FROM ROTAVIRUS DISEASE FROM BIRTH (/days/2022-07-13/abstract/82808) - **Julie E Bines** (/speaker/427969)

Rapid Response with the Molecular Clamp Vaccine Platform (/days/2022-07-13/abstract/83032) - **Daniel Watterson** (/speaker/435293)

Progress towards a vaccine to prevent gonorrhoea (/days/2022-07-13/abstract/83021) - **Kate Seib** (/speaker/428885)

Determining the role of phase-variable DNA methyltransferases in *Actinobacillus pleuropneumoniae* (/days/2022-07-13/abstract/81959) - **Nusrat Nahar** (/speaker/422762)

Koala combination vaccine against Chlamydia and KoRV induces cellular immune response in wild free ranging koalas (/days/2022-07-13/abstract/82529) - **Samuel Phillips** (/speaker/425933)

Novel small molecules that increase the susceptibility of *Neisseria gonorrhoeae* to cationic antimicrobial peptides by inhibiting lipid A phosphoethanolamine transferase (/days/2022-07-13/abstract/82837) - **Charlene Kahler** (/speaker/428179)

Putting Food Microbiology on the Public Palate

🕒 9:00AM - 10:30AM

📅 Wednesday, 13th July

📍 Meeting Room C3.4

👤 Chairs: Andrea McWhorter & Huong Pham

Sponsored by:

Foodborne pathogens as adulterants? (/days/2022-07-13/abstract/83016) - **Julian Cox** (/speaker/428883)

Anti-biofilm activity of cold atmospheric-pressure plasma (/days/2022-07-13/abstract/81970) - **Anne Mai-Prochnow** (/speaker/422828)

Reduction of Environmental Listeria Using Gaseous Ozone in a Cheese Processing Facility. (/days/2022-07-13/abstract/83039) - **Sofroni Eglezos** (/speaker/428907)

Genomic epidemiology and multilevel genome typing of Australian *Salmonella enterica* serovar Enteritidis (/days/2022-07-13/abstract/82578) - **Lijuan Luo** (/speaker/426364)

Evaluating plasma-activated water as a method for controlling *Salmonella* on egg farms (/days/2022-07-13/abstract/82543) - **Adrian I Abdo** (/speaker/426090)

Peroxyacetic acid and acidified sodium chlorite reduce *Campylobacter jejuni* and *Salmonella* Typhimurium contamination on whole chicken carcasses and reduce bacterial virulence (/days/2022-07-13/abstract/82615) - **Andrea R McWhorter** (/speaker/426710)

AMR One Health

🕒 9:00AM - 10:30AM

📅 Wednesday, 13th July

📍 Meeting Room C3.5

👤 Chairs: Daniel Bogema & Melissa Brown

A new water sanitiser for widespread use in the food industry (/days/2022-07-13/abstract/82569) - **Abiodun D Ogunniyi** (/speaker/426281)

Silver gulls and Salmonella: microbial exchange at the human-wildlife interface (/days/2022-07-13/abstract/83035) - **Bethany Hoyer** (/speaker/428903)

F Plasmid Lineages in *Escherichia coli* ST95: Implications for Host Range, Antibiotic Resistance, and Zoonoses (/days/2022-07-13/abstract/82307) - **Max L Cummins** (/speaker/424885)

Cyanobacteria as a critical reservoir of the environmental antimicrobial resistome (/days/2022-07-13/abstract/82538) - **Verlaine J Timms** (/speaker/425974)

Plasmids of multidrug resistant *Klebsiella pneumoniae* pathogenic clones. (/days/2022-07-13/abstract/82590) - **Carola Venturini** (/speaker/426465)

A role for ColV plasmids in the evolution of pathogenic *Escherichia coli* ST58 (/days/2022-07-13/abstract/82596) - **Steven P Djordjevic** (/speaker/426494)

Gut Microbes

🕒 9:00AM - 10:30AM

📅 Wednesday, 13th July

📍 Meeting Room C3.6

👤 Chairs: Samuel Forster & Senaka Ranadheera

Defining new molecular pathways involved in stomach B cell lymphoma associated with chronic *Helicobacter pylori* infection (/days/2022-07-13/abstract/83014) - **Richard Ferrero** (/speaker/428882)

Chronic unexplained (functional) gut disorders and novel gut bacteria (/days/2022-07-13/abstract/83011) - **Nicholas Talley** (/speaker/428879)

Developing novel microbial therapeutics to prevent life-threatening fungal infections (/days/2022-07-13/abstract/82370) - **Megan D Lenardon** (/speaker/424813)

Characterising the functional diversity of the gastrointestinal microbiota (/days/2022-07-13/abstract/82607) - **Remy B Young** (/speaker/426508)

Clostridioides difficile infection damages host recovery processes (/days/2022-07-13/abstract/82424) - **Ashleigh P Rogers** (/speaker/425126)

Understanding increased virulence of invasive multidrug resistant *Salmonella enterica* (/days/2022-07-13/abstract/82597) - **Jaclyn S Pearson** (/speaker/426432)

Morning Tea

🕒 10:30AM - 11:00AM

📅 Wednesday, 13th July

📍 The Gallery

Plenary Session

🕒 11:00AM - 12:30PM

📅 Wednesday, 13th July

📍 Cockle Bay Rooms

👤 Chairs: Chris Greening & Jai Tree

Coral reef bacteriology and virology: What we know and how it informs us about the principles of microbiomes (/days/2022-07-13/abstract/83053) - **Rebecca Vega-Thurber** (/speaker/428961)

L-form bacteria: antibiotics, lytic enzymes, oxidative stress and recurrent infection (/days/2022-07-13/abstract/82984) - **Jeff Errington** (/speaker/428799)

Lunch

🕒 12:30PM - 2:00PM

📅 Wednesday, 13th July

📍 The Gallery

LGBTQIA+ Networking Session

🕒 12:30PM - 1:45PM

📅 Wednesday, 13th July

📍 Cockle Bay Rooms

A support network for LGBTQIA+ microbiologists and their allies where we can openly talk about what it is to be sexually and gender diverse in heteronormative environments, how we can express ourselves and how we support each other to get the best for ourselves. This session follows on the heels of the inaugural LGBTQIA+ Network event hosted by the NSW-ACT Branch and now we aim to take the network national. So come along to learn more, get involved or to just have a chat with like-minded people

Contact Maurizio Labbate (mailto:maurizio.labbate@gmail.com) and Heema Vyas (mailto:heema.vyas@sydney.edu.au) for more information.

Session by Kerry Chant

🕒 2:00PM - 3:30PM

📅 Wednesday, 13th July

📍 Cockle Bay Rooms

👤 Chairs: Jon Iredell & Martina Sanderson-Smith

Lessons from COVID-19, and future challenges (/days/2022-07-13/abstract/83036) - **Kerry Chant** (/speaker/428904)

Education Session: Where to start and how to sustain a teaching and research career

🕒 2:00PM - 3:30PM

📅 Wednesday, 13th July

📍 Meeting Room C3.4

👤 Chair: Meredith Hughes

Transitioning to a teaching and research position – tales from an ex-research only fellow. (/days/2022-07-13/abstract/82930) - **Sheena McGowan** (/speaker/428609)

The tracks of my years – in teaching (/days/2022-07-13/abstract/83051) - **Julian Cox** (/speaker/428952)

Panel Discussion:

- Martina Jelocnik
- Jack Wang
- Sheena McGowan
- Julian Cox

History Session: Felons and Infections - Early days in Sydney Cove

🕒 2:00PM - 3:30PM

📅 Wednesday, 13th July

📍 Meeting Room C3.5

👤 Chair: Cheryl Power

A short history of hospital IPC in Australia: post-WW2 to COVID-19 (/days/2022-07-13/abstract/82140) - **Lyn Gilbert** (/speaker/423609)

Sydney's Vaccine Institution: our local response to a global disease (/days/2022-07-13/abstract/82257) - **Peter Hobbins** (/speaker/424209)

Afternoon Tea

🕒 3:30PM - 4:00PM

📅 Wednesday, 13th July

📍 The Gallery

Molecular Microbiology

🕒 4:00PM - 5:30PM

📅 Wednesday, 13th July

📍 Cockle Bay Rooms

👤 Chairs: Bill Söderström & Verlaine Timms

Fabricating fluorescent food-poisoning friends for fun and finance (/days/2022-07-13/abstract/84167) - **Nicholas Coleman** (/speaker/436099)

Protozoan predation drives tuned biofilm formation and fibril formation in Pseudomonas fluorescens SBW25. (/days/2022-07-13/abstract/83033) - **Heather Hendrickson** (/speaker/428901)

Replication control of enterococcal pRUM-like MDR plasmids (/days/2022-07-13/abstract/83617) - **Slade Jensen** (/speaker/432984)

An epigenetic switch activates bacterial quorum sensing and horizontal DNA transfer (/days/2022-07-13/abstract/82555) - **Tahlia R Bastholm** (/speaker/426253)

Visualization of mRNA Expression in *Pseudomonas aeruginosa* Aggregates Reveals Spatial Patterns of Fermentative and Denitrifying Metabolism (/days/2022-07-13/abstract/82641) - **Jadzia R K Livingston** (/speaker/426864)

A small protein plays a big role in archaeal cell division (/days/2022-07-13/abstract/82448) - **Yan Liao** (/speaker/425261)

Environmental Microbiology - Turf to Surf

🕒 4:00PM - 5:30PM

📅 Wednesday, 13th July

📍 Meeting Room C3.4

👤 Chairs: Michael Kertesz & Michael Doane

Domination through Microbial Manipulation: An investigation of how Australian native shrubs can inhibit forestry plantation establishment by driving repressive soil microbiomes (/days/2022-07-13/abstract/82966) - **Jonathan Plett** (/speaker/428734)

Microbial community responses to drought in dryland soils - a continental and global view (/days/2022-07-13/abstract/83028) - **Thomas Jeffries** (/speaker/428896)

Understanding and mitigating microbial disease in our underwater forests (/days/2022-07-13/abstract/83030) - **Suhelen Egan** (/speaker/428898)

An oxygen-insensitive hydrogenase extracts and reduces respiratory quinone using atmospheric hydrogen (/days/2022-07-13/abstract/82227) - **Chris Greening** (/speaker/424049)

Nomadic communities emerge from natural microbial communities (/days/2022-07-13/abstract/82038) - **Susanna R Grigson** (/speaker/423201)

An investigation into the Antarctic uncultured bacterial phylum *Candidatus* Eremiobacterota (/days/2022-07-13/abstract/82153) - **Dana Tribbia** (/speaker/423777)

Clinical and Diagnostic Microbiology

🕒 4:00PM - 5:30PM

📅 Wednesday, 13th July

📍 Meeting Room C3.5

👤 Chairs: Robert Norton & Noor-UI-Huda Ghori

Challenges in the chronic management of cryptococcosis (/days/2022-07-13/abstract/82956) - **Tania Sorrell AM** (/speaker/428688)

Monkeypox – an old virus causing a new problem (/days/2022-07-13/abstract/83029) -

Dominic Dwyer (/speaker/428897)

Rapid method combining genotypic and phenotypic measures for viability and antibiotic susceptibility (/days/2022-07-13/abstract/82551) - **Nicole E Lima** (/speaker/426128)

The efficacy of antioxidant-antibiotic combination therapy on *Achromobacter xylosoxidans* in a cystic fibrosis lung cell model. (/days/2022-07-13/abstract/82148) - **Aditi Aiyer** (/speaker/423747)

A modern-day detective finding a way to use bioinformatics tools to detect stx1/2 genes in shiga toxin-producing *E. coli* isolates (/days/2022-07-13/abstract/82496) - **Raquel Cooper** (/speaker/425607)

SALTy: a novel *Staphylococcus aureus* Lineage Typing tool (/days/2022-07-13/abstract/82614) - **Liam Cheney** (/speaker/426691)

Antimicrobial Drug Discovery

🕒 4:00PM - 5:30PM

📅 Wednesday, 13th July

📍 Meeting Room C3.6

👤 Chairs: Mark Willcox & Lucie Semeneć

Novel antibiotic adjuvant approaches against multidrug resistant pathogens and biofilms (/days/2022-07-13/abstract/83015) - **Makrina Totsika** (/speaker/428884)

Antibiotic discovery from human pathogenic *Nocardia* species (/days/2022-07-13/abstract/83013) - **Sacha Pidot** (/speaker/435292)

A diamond in the rough: high-throughput approaches to hone antibiotic discovery (/days/2022-07-13/abstract/82605) - **Amy K Cain** (/speaker/426495)

Broad-spectrum *in vitro* activity of macrophage infectivity potentiator inhibitors against Gram-negative bacteria (/days/2022-07-13/abstract/82782) - **Nicole Bzdyl** (/speaker/427800)

Next-generation antimicrobial eutectogels for rapid wound treatment (/days/2022-07-13/abstract/82341) - **Miyah Awad** (/speaker/424664)

Delivering fluconazole to *Cryptococcus neoformans* in style using pH-responsive lipid nanoparticles (/days/2022-07-13/abstract/82646) - **Sheeana Gangadoo** (/speaker/426926)

Break

🕒 5:30PM - 5:45PM

📅 Wednesday, 13th July

Rubbo Oration

🕒 5:45PM - 6:45PM

📅 Wednesday, 13th July

📍 Cockle Bay Rooms

👤 Chair: Dena Lyras

Large and alternatively coded phages, obligate symbionts and other intriguing members of human microbiomes (/days/2022-07-13/abstract/83048) - **Jill Banfield** (/speaker/428938)

Rubbo Celebration

🕒 6:45PM - 8:45PM

📅 Wednesday, 13th July

📍 Parkside 1

← Tuesday (/days/2022-07-12)

Thursday → (/days/2022-07-14)

Thursday, 14th July Australian Society for Microbiology Annual Scientific Meeting 2022

Days

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Clinical and Public Health

🕒 8:30AM - 10:00AM

📅 Thursday, 14th July

📍 Cockle Bay Rooms

👤 Chairs: Jodie McVernon & Jim Manos

The Future (Remains) Uncertain - Anticipating and responding to COVID-19 (/days/2022-07-14/abstract/81969) - **Jodie McVernon** (/speaker/422827)

SARS-CoV-2 and Influenza: Lessons from pandemic respiratory viruses (/days/2022-07-14/abstract/83046) - **Kanta Subbarao** (/speaker/428928)

Research and response to COVID-19 in low- and middle-income countries: perspectives from the Asia-Pacific region. (/days/2022-07-14/abstract/83042) - **Meru Sheel** (/speaker/428910)

Rapid isothermal detection of Zika virus as an alternative to RT-PCR (/days/2022-07-14/abstract/82519) - **Rickyle C Balea** (/speaker/425660)

Designing therapeutic topical emollients to enhance skin barrier function in preterm infants (/days/2022-07-14/abstract/82643) - **Noor-UI-Huda Ghori** (/speaker/426876)

Antiviral Activity of Black Silicon Surfaces (/days/2022-07-14/abstract/82793) - **Samson Mah** (/speaker/428034)

Glycobiology and the Host Response

🕒 8:30AM - 10:00AM

📅 Thursday, 14th July

📍 Meeting Room C3.4

👤 Chairs: Johanna Kenyon & Charlene Kahler

Capsular polysaccharide types from *Acinetobacter baumannii* are determined from an extensive and diverse repertoire of genes found both within and outside the chromosomal locus for capsule biosynthesis (/days/2022-07-14/abstract/82018) - **Johanna J Kenyon** (/speaker/423061)

Altered glycosylation of the spike protein in a variant of SARS-CoV-2 (/days/2022-07-14/abstract/83017) - **Ben Schulz** (/speaker/428889)

Location, location, location... Using glycoproteomics to understand the substrates and targeting specificities of bacterial PglL glycosylation systems (/days/2022-07-14/abstract/81667) - **Nichollas E Scott** (/speaker/421167)

Salivary glycan dynamics during experimental human *Streptococcus pyogenes* pharyngitis (/days/2022-07-14/abstract/82545) - **Anuk Indraratna** (/speaker/426075)

Streptolysins are the primary inflammasome activators in macrophages during *Streptococcus pyogenes* infection (/days/2022-07-14/abstract/82624) - **Johanna Richter** (/speaker/426788)

Probing the expression and adhesion of glycans involved in *Helicobacter pylori* infection (/days/2022-07-14/abstract/82324) - **Daniel Sijmons** (/speaker/424583)

Molecular Analysis of Pathogens

🕒 8:30AM - 10:00AM

📅 Thursday, 14th July

📍 Meeting Room C3.5

👤 Chairs: Wilhelmina Huston & Mehrad Hamidian

Harnessing the ancient antibacterial weaponry of the type VI secretion system for fighting the antibiotic resistance crisis in the third millennium (/days/2022-07-14/abstract/82788) - **John D Boyce** (/speaker/427832)

Half a century after their discovery, cryo-EM structures of Red β and Erf annealases provide insights into their evolution and molecular mechanisms (/days/2022-07-14/abstract/82588) - **Gökhan Tolun** (/speaker/426401)

Transporters in *Plasmodium falciparum* - new drug targets and resistance determinants (/days/2022-07-14/abstract/82316) - **Adele M Lehane** (/speaker/424607)

Deployment of the type six secretion system arsenal by a sigma factor and enhancer binding protein in *Pseudomonas aeruginosa* (/days/2022-07-14/abstract/82046) - **Luke P Allsopp** (/speaker/423226)

Characterising the Tasmanian devil genovirome (/days/2022-07-14/abstract/82524) - **Emma F Harding** (/speaker/425665)

Genetically distinct M-related proteins from *Group A Streptococcus* and their interactions with human IgG (/days/2022-07-14/abstract/80832) - **Emma-Jayne Proctor** (/speaker/416727)

Terrestrial Microbiology

🕒 8:30AM - 10:00AM

📅 Thursday, 14th July

📍 Meeting Room C3.6

👤 Chairs: Michael Roach & Nicole Benaud

Exploring the chemical ecology of an oomycete pathogen, its host, and environment. (/days/2022-07-14/abstract/83023) - **Monica Gerth** (/speaker/428891)

Using bacteria to grow mushrooms - the microbial ecology of mushroom compost (/days/2022-07-14/abstract/82406) - **Michael Kertesz** (/speaker/425002)

Microbial recruitment, survival, and succession in environments at extremes of pH and salinity (/days/2022-07-14/abstract/82814) - **Talitha C Santini** (/speaker/428027)

Atmospheric trace gas oxidation fuels bacterial energy requirements in diverse environments (/days/2022-07-14/abstract/82076) - **Zahra F Islam** (/speaker/423399)

Living on a (Pr)Air; Characterising atmospheric chemosynthesis in bacteria and cold desert microbiomes (/days/2022-07-14/abstract/82194) - **Angelique Ray** (/speaker/423923)

Uncovering the diversity and plant growth promotion potential of native australian seed microbiomes for improving restoration practices. (/days/2022-07-14/abstract/82608) - **Allison Mertin** (/speaker/426520)

Morning Tea

🕒 10:00AM - 10:30AM

📅 Thursday, 14th July

📍 The Gallery

Host-Pathogen Interactions 2

🕒 10:30AM - 12:00PM

📅 Thursday, 14th July

📍 Cockle Bay Rooms

👤 Chairs: Daniel Mediati & Elizabeth Hartland

Representing the team: selecting protein antigens for CD4⁺ T cell-mediated immunity against intracellular bacterial infection (/days/2022-07-14/abstract/83012) - **Nancy Wang** (/speaker/429974)

LAT8881 and other naturally derived cytokine peptides limit respiratory virus replication and severe disease (/days/2022-07-14/abstract/82274) - **Michelle Tate** (/speaker/424271)

Nanobodies against COVID-19. (/days/2022-07-14/abstract/83019) - **Wai-Hong Tham** (/speaker/428887)

Anti-staphylococcal effect of cold atmospheric plasma is driven by *de novo* generation of oxygen derivatives in NOX2 dependent manner (/days/2022-07-14/abstract/82044) - **Nadira Frescaline** (/speaker/423222)

Polymicrobial biofilm formation by *Enterococcus faecalis* and *Staphylococcus aureus* results in resistance and immunomodulation of murine neutrophils (/days/2022-07-14/abstract/82228) - **Claudia J Stocks** (/speaker/424050)

Francisella tularensis subsp. *novicida* infection triggers host immunity via inflammasome signalling and antimicrobial killing by guanylate-binding proteins (/days/2022-07-14/abstract/82902) - **Shouya Feng** (/speaker/428382)

Synthetic Biology

🕒 10:30AM - 12:00PM

📅 Thursday, 14th July

📍 Meeting Room C3.4

👤 Chairs: Ian Paulsen & Muhammad Kamruzzaman

Evolution of DNA-binding specificity on a rugged fitness landscape (/days/2022-07-14/abstract/83020) - **Colin Jackson** (/speaker/428886)

Bioengineering textiles with synthetic biology: from dyeing fibres to capturing viral particles. (/days/2022-07-14/abstract/83024) - **Laura Navone** (/speaker/428892)

The rapid evolution of flagellar ion-selectivity in experimental populations of *E. coli* (/days/2022-07-14/abstract/83038) - **Matt Baker** (/speaker/428906)

Defining the molecular mechanisms driving microbial polyurethane degradation (/days/2022-07-14/abstract/82440) - **Lucie Semenec** (/speaker/425232)

TraDISort a holistic approach to metabolic engineering for small molecule overproduction (/days/2022-07-14/abstract/82640) - **Evan Gibbs** (/speaker/426858)

Evolution and characterisation of a plant-like chalcone synthase from cyanobacteria (/days/2022-07-14/abstract/82649) - **Joachim Larsen** (/speaker/426911)

AMR Pathogen Genomics

🕒 10:30AM - 12:00PM

📅 Thursday, 14th July

📍 Meeting Room C3.5

👤 Chairs: Garry Myers & Michael Payne

Clinical implementation of routine whole-genome sequencing for hospital infection control of multi-drug resistant pathogens (/days/2022-07-14/abstract/82611) - **Brian M Forde** (/speaker/426525)

Understanding the mechanisms and collateral damage of common antimicrobial biocides (/days/2022-07-14/abstract/82953) - **Francesca Short** (/speaker/428684)

Analysis of the putative replication initiation proteins encoded by plasmids found in *Acinetobacter baumannii* (/days/2022-07-14/abstract/82456) - **Mehrad Hamidian** (/speaker/425320)

Detailed analysis of an expanded *Clostridium perfringens* genome collection identifies novel plasmids. (/days/2022-07-14/abstract/82606) - **Emily L Gulliver** (/speaker/426663)

FIXATION OF ANTIMICROBIAL RESISTANCE GENES IN BACTERIAL CHROMOSOMES (/days/2022-07-14/abstract/82393) - **Alicia Fajardo-Lubian** (/speaker/424915)

Uncovering the role of the functional small RNA interactome in antibiotic tolerance in *Staphylococcus aureus* (/days/2022-07-14/abstract/82431) - **Winton Wu** (/speaker/425150)

Bacteriophage

🕒 10:30AM - 12:00PM

📅 Thursday, 14th July

📍 Meeting Room C3.6

👤 Chairs: Carola Venturini & Eby Sim

Sponsored by:

Type III CRISPR-Cas provides resistance against nucleus-forming jumbo phages via abortive infection (/days/2022-07-14/abstract/82769) - **Peter Fineran** (/speaker/427739)

L-form switching confers antibiotic, phage and oxidative stress tolerance in pathogenic *Escherichia coli* (/days/2022-07-14/abstract/82253) - **Aleksandra Petrovic-Fabijan** (/speaker/424200)

Two-step receptor binding required for bacteriophage infection of *Klebsiella pneumoniae*. (/days/2022-07-14/abstract/82071) - **Rhys A Dunstan** (/speaker/423295)

Application of Next Generation Sequencing for Detection and Identification of Bacteriophages. (/days/2022-07-14/abstract/82264) - **Tara L Cassidy** (/speaker/425929)

Hecatomb: An End-to-End Bioinformatics Research Platform for Viral Metagenomics (/days/2022-07-14/abstract/82380) - **Michael J Roach** (/speaker/425021)

Using assembly graphs to identify bacteriophages associated with gastrointestinal diseases (/days/2022-07-14/abstract/82504) - **Vijini Mallawaarachchi** (/speaker/425573)

Move to Plenary

🕒 12:00PM - 12:05PM

📅 Thursday, 14th July

Plenary Session

🕒 12:05PM - 12:50PM

📅 Thursday, 14th July

📍 Cockle Bay Rooms

👤 Chairs: Karl Hassan & Amy Cain

The ARC Centre of Excellence in Synthetic Biology - Inspired by Nature, Designed by Science (/days/2022-07-14/abstract/82122) - **Ian Paulsen** (/speaker/423529)

Closing Address

🕒 12:50PM - 1:10PM

📅 Thursday, 14th July

📍 Cockle Bay Rooms

CLINICON LUNCH & REGISTRATION

🕒 1:00PM - 2:00PM

📅 Thursday, 14th July

📍 Meeting Room E3.1 & E3.2

Lunch is only available to those who have a CliniCon ticket.

CLINICON: Welcome and Session 1

🕒 2:00PM - 3:30PM

📅 Thursday, 14th July

📍 Meeting Room E3.1 & E3.2

👤 Chairs: Taryn Crighton & Maria Globan

Faecal Microscopy – Sorting the Parasites from the Crap (/days/2022-07-14/abstract/83620) - **Richard Bradbury** (/speaker/433005)

A REVIEW OF BLOOD BORNE PARASITES. (/days/2022-07-14/abstract/83621) - **Francesca Azzato** (/speaker/433006)

e-diagnosis in Parasitology (/days/2022-07-14/abstract/83622) - **Harsha Sheorey** (/speaker/433007)

A case of Echinococcus sp and helicobacter pylori (/days/2022-07-14/abstract/81934) - **Mikayla T Kingston** (/speaker/422626)

Burkholderia pseudomallei – Laboratory identification in the MALDI-TOF era and safety (/days/2022-07-14/abstract/82801) - **Robert Norton** (/speaker/427946)

CLINICON AFTERNOON TEA

🕒 3:30PM - 4:00PM

📅 Thursday, 14th July

📍 The Gallery

CLINICON: Session 2

🕒 4:00PM - 5:30PM

📅 Thursday, 14th July

📍 Meeting Room E3.1 & E3.2

👤 Chairs: Francesca Azzato & Robert Norton

Mycobacteria – more than just TB (/days/2022-07-14/abstract/83623) - **Maria Globan** (/speaker/433008)

Buruli ulcer: a tropical disease in temperate Victoria (/days/2022-07-14/abstract/83992) - **Caroline Lavender** (/speaker/435271)

Not available (/days/2022-07-14/abstract/84143) - **Taryn Crighton** (/speaker/435959)

A changing landscape of *Neisseria gonorrhoeae* genotypes; rise of the susceptible clones? (/days/2022-07-14/abstract/82644) - **Ella Trembizki** (/speaker/426893)

Development and evaluation of a novel Multiple Cross Displacement Amplification assay for detection of toxigenic *Clostridioides difficile* as a Point-of-care testing (/days/2022-07-14/abstract/82401) - **Dazhi Jin** (/speaker/424984)

CLINICON: Welcome Function

🕒 5:30PM - 6:30PM

📅 Thursday, 14th July

📍 The Gallery

← Wednesday (/days/2022-07-13)

Friday → (/days/2022-07-15)

Friday, 15th July Australian Society for Microbiology Annual Scientific Meeting 2022

Days

Monday, 11th July (/days/2022-07-11)

Tuesday, 12th July (/days/2022-07-12)

Wednesday, 13th July (/days/2022-07-13)

Thursday, 14th July (/days/2022-07-14)

Friday, 15th July (/days/2022-07-15)

Search

Speakers (/speakers)

CLINICON: Session 3

🕒 9:30AM - 11:00AM

📅 Friday, 15th July

📍 Meeting Room E3.1 & E3.2

👤 Chairs: Anthony Jennings & Richard Bradbury

Practical Mycology (/days/2022-07-15/abstract/83927) - **Evanthia Tambosis** (/speaker/434987) and **Charlotte Webster** (/speaker/435270)

CLINICON MORNING TEA

🕒 11:00AM - 11:30AM

📅 Friday, 15th July

📍 Meeting Room E3.1 & E3.2

CLINICON: Session 4

🕒 11:30AM - 1:00PM

📅 Friday, 15th July

📍 Meeting Room E3.1 & E3.2

👤 Chairs: Charlotte Webster & Evanthia Tambosis

Japanese encephalitis virus in SE Australia 2022 Why now, why here, what's next? (/days/2022-07-15/abstract/84145) - **Linda Hueston** (/speaker/435961)

Workflow Scaling in COVID-19, are molecular labs now ready for a high morbidity Influenza pandemic? (/days/2022-07-15/abstract/83925) - **Shane Byrne** (/speaker/434986)

Comprehensive, head-to-head evaluation of anti-SARS-CoV-2 serology assays (/days/2022-07-15/abstract/84146) - **Wayne Dimech** (/speaker/435962)

Rapid isothermal detection of Zika virus as an alternative to RT-PCR (/days/2022-07-15/abstract/82526) - **Rickyle C Balea** (/speaker/425732)

CLINICON LUNCH

🕒 1:00PM - 2:30PM

📅 Friday, 15th July

📍 Meeting Room E3.1 & E3.2

CLINICON: Session 5

🕒 2:30PM - 3:48PM

📅 Friday, 15th July

📍 Meeting Room E3.1 & E3.2

👤 Chairs: Wayne Dimech & Mikayla Kingston

Future Trends – Challenges and Opportunities (/days/2022-07-15/abstract/83993) - **Anthony Jennings** (/speaker/435272)

Digital Imaging and AI in Microbiology (/days/2022-07-15/abstract/83924) - **Derek Holzhauser** (/speaker/434985)



Rapid molecular diagnostics for extensively-drug resistant *Salmonella* Typhi (/days/2022-07-15/abstract/82796) - **Jacob Tickner** (/speaker/427899)

Individualised treatment of *Mycoplasma genitalium* infections - it is time to incorporate of fluoroquinolone resistance testing into clinical care (/days/2022-07-15/abstract/82259) - **Emma L Sweeney** (/speaker/424210)

The elusiveness and significance of clinical isolates of cysteine-requiring *Escherichia coli* (/days/2022-07-15/abstract/82412) - **Christopher J McIver** (/speaker/425098)

CLINICON CLOSE

🕒 3:48PM - 4:00PM

 Friday, 15th July
 Meeting Room E3.1 & E3.2

[← Thursday \(/days/2022-07-14\)](#)