



Victorian Infection
& Immunity Network

Young Investigator Symposium Series

15 – 17 November 2021

www.viin.org.au

#viinyis, #YoungVIIN2021

Welcome to the 2021 VIIN Young Investigator Symposium



Dear Colleagues and Friends,

On behalf of the members of the Victorian Infection and Immunity Network's Executive Committee, we welcome you to the 2021 Young Investigator Symposium.

Special welcome to our keynote speakers: Dr Michelle Boyle of QIMR-Berghofer and Professor Colin Pouton of the Monash Institute of Pharmaceutical Sciences, Monash University.

This is the 14th year that the VIIN has convened a symposium for young investigators and the second time in virtual format – a necessary decision in the face of the COVID-19 pandemic.

We are indebted to many who have been vital to bringing the 2021 meeting about, namely:

- The Symposium Organising Committee, who have worked tirelessly to review abstracts and organise the many logistical elements of the day:

Catarina Almeida, University of Melbourne

Aaron Brice, Australian Centre for Disease Preparedness, CSIRO

Laura Cook, University of Melbourne

Andrew Fleetwood, Baker Institute

Carlo Giannangelo, Monash Institute of Pharmaceutical Sciences

San Lim, Hudson Institute of Medical Research

Rhea Longley, Walter and Eliza Hall Institute

Joyanta Modak, Deakin University

Nicole Messina, Murdoch Children's Research Institute

Ursula Norman, Monash University

Jason Paxman, La Trobe University

Linda Reiling, Burnet Institute

Patrick Schriek, University of Melbourne

Rebecca Smith, VIIN

Yanie Tayipto, Walter and Eliza Hall Institute

Ryan Tseng, University of Melbourne

Jinxin Zhao, Monash University

- Communications Workshop speakers: Dr Shane Huntington, CEO of Little Big Steps and Catherine Somerville, Senior Media Advisor, University of Melbourne
- Careers Panel speakers: Dr Hayley Joseph, Australian Red Cross LifeBlood; Dr Jesse Toe, IP Group plc; Dr Anubhav Srivastava, Dimerix Bioscience; Dr Yu-Wei Lin, Certara; Dr Emma Petrie, Translational Research program at the VCCC.
- The 50+ Session chairs and judges for oral presentations and posters, which is a reflection of the increasing popularity of this event. Thanks to each for your time and expertise.
- The sponsors and advertisers for this symposium. Your support is more and more important to the success of this event
- The 15 Academic Institutions and government agencies that support VIIN annually through financial contributions. Without your support, our activities would cease.

Finally, thank you to everyone who is here as a delegate or to present a talk or poster. This meeting is for you. We always appreciate your participation and look forward to hearing your talks, Science Bites and posters.

Prof Paul Hertzog and Prof Heidi Drummer, Co-Convenors of VIIN

Thank you to our workshop hosts



Thank you to the sponsors of prizes for Best Oral Presentations



**Thank you to the sponsors of prizes for Best Poster, Science Bites
and People's Choice Awards**

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Thank you to the sponsors of prizes for Best Poster, Science Bites
and People's Choice Awards (continued)



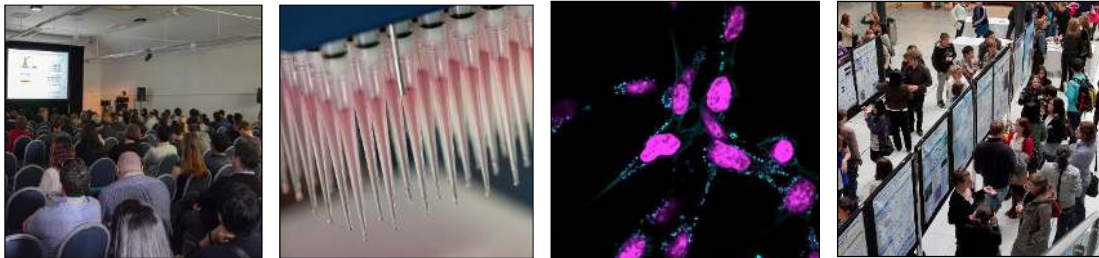
For links to sponsor websites: <https://www.viin.org.au/event/viin-young-investigator-symposium-2021>



Victorian Infection & Immunity Network

Connecting Researchers, Students, Health Care and Industry
to solve problems in infectious diseases and immunology

The Victorian Infection and Immunity Network (VIIN) brings together researchers from diverse disciplines across various nodes within Victoria who have an interest in infection and immunity. Through events such as the Lorne Infection and Immunity Conference and annual postgraduate and postdoctoral research symposia, VIIN connects established and emerging infection and immunity researchers with the goal of seeding new collaborations and strengthening research performance and capabilities.



The website at www.viin.org.au contains member profiles, contact details and fields of research, information on relevant news, events, platform technologies, career and funding opportunities.

VIIN Contributors include:



For enquiries contact: info@viin.org.au

12TH LORNE INFECTION & IMMUNITY 2022
HYBRID CONFERENCE | 16 - 18 FEBRUARY
www.lorneinfectionimmunity.org



The Hartland Oration at Lorne

Professor Elizabeth Hartland was VIIN Co-Convenor between 2009 and 2017. Professor Hartland had key roles in co-convening the Lorne Infection and Immunity Conferences (2012-2017), the VIIN Industry Alliance (2012-2014) and the VIIN Young Investigator Symposia (2009 – 2016). Together with Co-Convenor Professor Paul Hertzog, Liz oversaw the roll-out of VIIN's new website, its increasing presence on social media, implementation of the VIIN's annual careers evenings (2013-2017) and numerous other initiatives.



In honour of Liz's contribution to VIIN, the network is delighted to have established the Hartland Oration. This oration will be delivered at the Lorne Infection and Immunity Conference from 2018 onwards. The Hartland Orator will be selected at this VIIN Young Investigator Symposium and will be the post-doctoral researcher giving the best 10 minute oral presentation. This outstanding young researcher will receive free registration to the 2021 Lorne Infection and Immunity Conference and a cash contribution toward their accommodation, meals and transport.

Additional prizes at the VIIN Young Investigator Symposium

As in years past, prizes will also be awarded for:

- ePoster prizes for best student and best post-doc
- Science Bites prizes for best student and best post-doc (3 minute oral presentations)
- Best VIIN Young Investigator Symposium PhD talk (10 minute oral presentation)
- People's Choice Awards – stay tuned!



12TH LORNE INFECTION & IMMUNITY 2022

HYBRID CONFERENCE | 16 - 18 FEBRUARY

www.lorneinfectionimmunity.org

EARLY-BIRD REGISTRATION: WEDNESDAY 24 NOVEMBER 2021

POSTER ABSTRACTS CLOSE: TUESDAY 14 JANUARY 2022

INTERNATIONAL SPEAKERS

Richard Alm, Boston University, USA

Sanjay Chotirmall, NTU, Singapore

Ashraf Ibrahim, Lundquist Institute, USA

Iliyan Iliev, Cornell University, USA

Carolyn King, University of Basel, Switzerland

Suzanne Noble, University of California San Francisco, USA

Maria-Grazia Pizza, GSK, Italy

Caetano Reis e Sousa, Francis Crick Institute, UK

NATIONAL SPEAKERS

Jeremy Barr, Monash University, VIC

Justin Beardsley, University of Sydney, NSW

Lea-Ann Kirkham, Telethon Kids Institute, WA

Kate Quinlan, University of New South Wales, NSW

Kylie Quinn, RMIT, VIC

Sudha Rao, QIMR Berghofer Medical Research Institute, QLD

Leann Tilley, University of Melbourne, VIC

Chris Tonkin, WEHI, VIC

David Tschärke, The Australian National University, ACT

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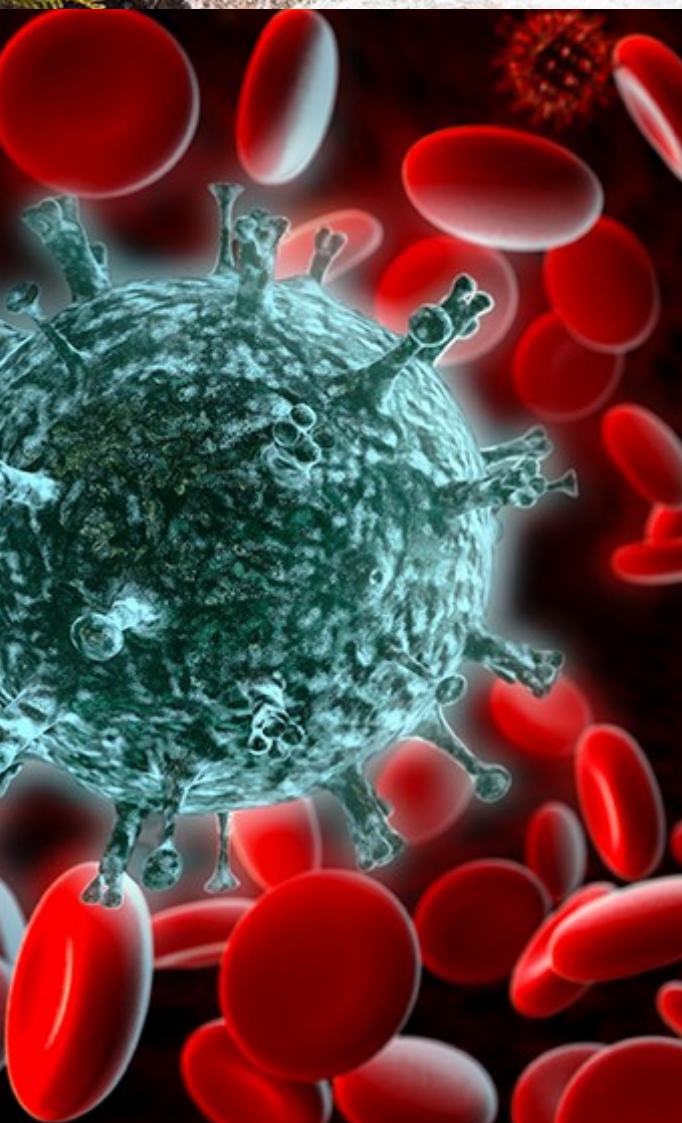
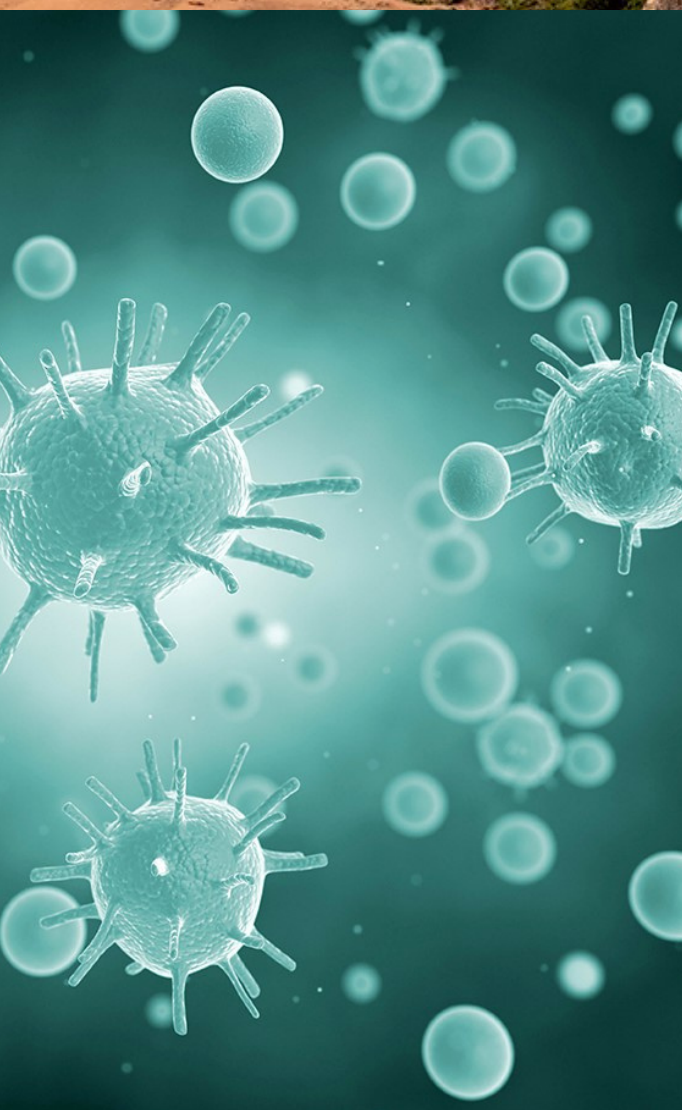
The Annual Meeting of the



Victorian Infection
& Immunity Network

AID

Australian Infectious Diseases
Research Centre



Program-at-a-Glance 2021

MONDAY 15 NOVEMBER
SESSION 1: 9am – 10.30am
Keynote speaker: Professor Colin Pouton, Monash Institute of Pharmaceutical Sciences
Talks selected from abstracts
Technical workshop
SESSION 2: 10.45am – 12:30pm
Talks selected from abstracts
Technical workshop
SESSION 3: 1.30pm – 3.30pm
Concurrent poster sessions I, II and III
SESSION 4: 3.45pm – 5.00pm
Talks selected from abstracts
Daily prize announcements

TUESDAY 16 NOVEMBER
SESSION 5: 9am – 11am
Careers Panel and Q&A
<ul style="list-style-type: none"> • Dr Anubhav Srivastava, Dimerix Bioscience • Dr Jesse Toe, IP Group plc • Dr Hayley Joseph, Australian Red Cross LifeBlood • Dr Yu-Wei Lin, Certara • Dr Emma Petrie, Translational Research program at the VCCC
SESSION 6: 11.15am – 1pm
Keynote speaker: Dr Michelle Boyle, QIMR-Berghofer
Talks selected from abstracts
Technical workshop
SESSION 7: 1.10pm – 2.10pm
“Lunch with the speakers” <i>(Registration open until 4pm Monday)</i>
SESSION 8: 2.20pm – 4.40pm
Talks selected from abstracts
Technical workshop
Daily prize announcements

WEDNESDAY 17 NOVEMBER
SESSION 9: 9am – 11am
Communications Workshop and Q&A
<ul style="list-style-type: none"> • Catherine Somerville, University of Melbourne • Dr Shane Huntington, Little Big Steps
SESSION 10: 11.15am – 2pm
Talks selected from abstracts
Technical workshops
Daily prize announcement
Grand prize announcement
SESSION 11: 6.30pm – 8.30pm
Trivia night <i>(Registration open until 2.30pm Wednesday)</i>

**Monday 15
November**



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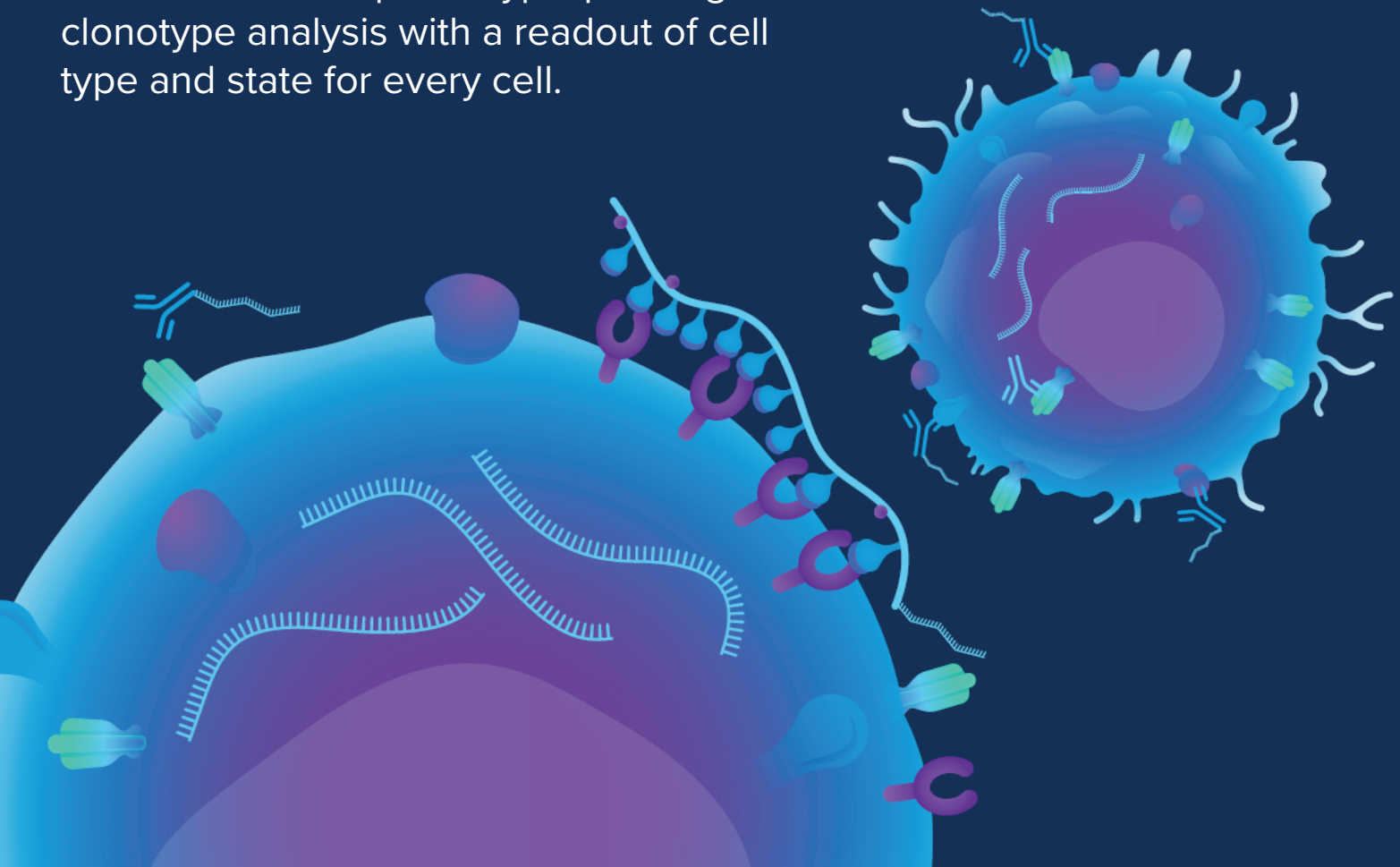
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SESSION 1

Monday 15 November: 9am – 10.30am

09:00 – 09:10	Welcome and Acknowledgement of Country Chairs: Linda Reiling, Burnet Institute and Carlo Giannangelo, Monash Institute of Pharmaceutical Sciences
09:10 – 09:40	Keynote Speaker I
09:10	Keynote speaker: Professor Colin Pouton, Monash Institute of Pharmaceutical Sciences, Monash University mRNA vaccines and therapeutics: COVID-19 and beyond
09:40 – 10:10	Science Bites I
09:40	Evidence for an epididymal-specific, phospholipid-targeting human defensin in immunomodulation Guneet Bindra, Department of Biochemistry and Genetics, La Trobe Institute for Molecular Science (PhD)
09:43	Characterising T cell responses following seasonal influenza vaccination Olivia Campisi, Department of Microbiology and Immunology, University of Melbourne (Honours)
09:46	Application of serological markers for the assessment of the spatial transmission of <i>Plasmodium vivax</i> infections in Papua New Guinea Natalie Cerovac, Population Health and Immunity Division, Walter and Eliza Hall Institute, Department of Medicine, Dentistry and Health Sciences, University of Melbourne (Honours)
09:49	The role of an innate-like T cell subset during <i>Plasmodium</i> sporozoite infection Phoebe Dewar, Department of Microbiology and Immunology, University of Melbourne (PhD)
09:52	Variants strike back: Understanding vaccine-induced antibody responses to emerging SARS-CoV-2 RBD variants Ebene Haycroft, Department of Microbiology and Immunology, The Peter Doherty Institute for Infection and Immunity, University of Melbourne (Masters)
09:55	Knockdown of PTEX impairs the haemoglobin digestion pathway in <i>Plasmodium falciparum</i> Thorey Jonsdottir, Life Science, Burnet Institute, Department of Microbiology and Immunology, University of Melbourne (PhD)
09:58	Using <i>Anopheles</i> salivary antibody biomarkers to assess the effectiveness of personal insect repellent in Southeast Myanmar Ellen Kearney, Life Sciences, Burnet Institute (PhD)
10:01	Alternate Synthesis and the Evaluation of 2 Aminobenzimidazole Antimalarials Jomo Kigotho, Medicinal Chemistry, Monash Institute of Pharmaceutical Sciences (PhD)
10:10 – 10:25	Technical workshop – Millennium Science Immune Cell and Repertoire Profiling at Single Cell Resolution Geoffrey McDermott, Science & Technology Advisor
10:25 – 10:30	Concluding Remarks and People’s Choice Prize Announcement
10:30 – 10:45	Morning tea break



New Reagents and Technologies for Flow Cytometry and Imaging

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- Brighter Secondary Antibodies
- Luminex
 - RNA Multiplexing
 - Hallmarks of Cancer
 - Apoptosis
 - Coronavirus

Date

November 15, 2021

Time

11:55am-12:25pm

Location

VIIN Young Investigator Symposium

Speaker

Anthony Park
Flow Cytometry, Imaging and Luminex
Reagent Specialist

Contact:

kevin.lau@thermofisher.com OR Anthony.park@thermofisher.com

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SESSION 2

Monday 15 November: 10:45am – 12:30pm

10:45 – 10:50	Welcome and Acknowledgement of Country Chairs: Andrew Fleetwood, Baker Institute and Ryan Tseng, University of Melbourne
10:50 – 10:55	Sponsor message - KNF
	Sponsor message – American Society for Microbiology
10:55 – 11:55	ORAL PRESENTATIONS I
10:55	Immune signature of acute pharyngitis in a <i>Streptococcus pyogenes</i> human challenge trial Jeremy Anderson, Infection and Immunity, Murdoch Children's Research Institute (PhD student)
11:05	Molecular surveillance of asymptomatic <i>Plasmodium falciparum</i> in high-transmission regions in the context of interventions Dionne Argyropoulos, Department of Microbiology and Immunology, University of Melbourne, Bio21 Institute (PhD student)
11:15	PD-1 Inhibits T Cell Activation by Decreasing Division Destiny Melissa Butler, Immunology Division, Walter and Eliza Hall Institute (PhD student)
11:25	An untargeted target identification approach for novel aminobenzimidazole antimalarials identifies Exportin-1 as a potential target Matthew Challis, Drug delivery, disposition and dynamics, Monash Institute of Pharmaceutical Sciences (PhD student)
11:35	Pathogen-tailored transcriptional networks of T follicular helper cells Lennard Dalit, Immunology, Walter and Eliza Hall Research Institute (PhD student)
11:45	Withdrawn
11:55 – 12:25	Technical workshop – ThermoFisher Scientific Anthony Park, Technical Sales Specialist New Reagents and Technologies for Flow Cytometry and Imaging
12:25 – 12:30	Concluding Remarks and People's Choice Prize Announcement
12:30 – 13:30	Lunch break

SESSION 3 (CONCURRENT STREAMS)

Monday 15 November: 1:30pm – 3:30pm (POSTER I)

13:30 – 13:40	Welcome and Acknowledgement of Country Chairs: Laura Cook, University of Melbourne and Joyanta Modak, Deakin University
13:40 – 15:30	E - POSTER SESSION I (concurrent)
13:40	Functional evaluation of common NOD2 gene variants in patients with antibody deficiency and gastrointestinal complications Ebony Blight, Department of Immunology and Pathology, Monash University (Honours)
13:45	Behavioural and Psychological Outcome of Co-Designing COVID-19 Health Communication Messages with Culturally and Linguistically Diverse Communities Jasper Liang, Optimise Group, Burnet Institute (Honours)
13:50	The information, communication and support needs of families undergoing paediatric COVID-19 testing Lily Richard, Vaccine Uptake Group, Murdoch Children's Research Institute (Honours)
13:55	The Role of Antiviral Soluble Mediators in Mollusc Haemolymph Angus Watson, Department of Physiology, Anatomy, and Microbiology, La Trobe University (Honours)
14:00	Why some SARS-CoV-2 variants infect wild type mice and rats Shruthi Mangalaganesh, Australian Centre for Disease Preparedness, CSIRO (Undergraduate)
14:05	Understanding Bacteria's secret weapon: Phylogeny, function, and structure of Autotransporter proteins Kaitlin Clarke, La Trobe Institute of Molecular Biology, La Trobe University (Masters)
14:10	A novel structure of SARS-CoV-2 Nsp1/5'-UTR and interplay: Incites viral translational regulation and implications for potential therapeutics, vaccines Wilma Lopes, Monash Biomedicine Discovery Institute, Monash University (Masters)
14:15	Characterisation of Bacterial Dsb Proteins for Therapeutic Applications Lachlan Mitchell, La Trobe Institute for Molecular Science, La Trobe University (Masters)
14:20	Atypical evolutionary signatures driving the global evolution of emm4 Group A <i>Streptococcus</i> Chaw Thwe, Department of Microbiology and Immunology, Peter Doherty Institute for Infection and Immunity, University of Melbourne (Masters)
14:25	Aged, MLKL-deficient mice develop multifocal inflammatory lesions and exhibit altered peripheral circulating white blood cell counts Emma Tovey Crutchfield, Inflammation Department, Walter Eliza Hall Institute of Medical Research (Masters)
14:30	Drug screening to uncover novel aspects of <i>Salmonella</i> infection

	Jiyao Gan, Centre for Innate Immunity and Infectious Diseases, Hudson Institute of Medical Research (ECR)
14:35	Sex differences in renal and systemic inflammation in a new mouse model of diet-induced obesity Maria Jelinic, Centre for Cardiovascular Biology and Disease Research, La Trobe University (ECR)
14:40	Interferon-Induced Transmembrane Protein 3 (IFITM3) SNPs and COVID-19 disease severity Xiaoxiao Jia, Department of Microbiology and Immunology, Peter Doherty Institute for Infection and Immunity, University of Melbourne (ECR)
14:45	Early life infection is associated with proinflammatory, atherogenic, and diabetogenic metabolomic and lipidomic profiles at 12 months of age Toby Mansell, Inflammatory Origins, Murdoch Children's Research Institute (ECR)
14:50	T-bet dependent CD4+ effector differentiation is intertwined with memory formation in viral settings Amania Sheikh, Immunology, Walter Eliza Hall Institute of Medical Research (ECR)
14:55	Genetic mutations in host TMPRSS2 reduced COVID-19 infection in patients and potential drugs showed viral clearance in cohort studies Naveen Vankadari, Biomedicine Discovery Institute, Monash University (ECR)
15:00	Arbidol impairs SARS-CoV-2 spike glycoprotein trimerization and reduced mortality in adult COVID-19 patients in a cohort study Naveen Vankadari, Biomedical Discovery Institute and Department of Biochemistry, Monash University (ECR)
15:05	The balance of IL-12 and IL-23 determines the bias of MAIT1 versus MAIT17 responses during bacterial infection Huiheng Wang, Peter Doherty Institute of Infection and Immunity, University of Melbourne (ECR)
15:10	Management of Tuberculosis Infection (TBI) in Victorian children: a retrospective clinical audit of TBI management, and factors affecting treatment completion Rebecca Holmes, Melbourne Medical School, University of Melbourne
15:15 – 15:20	People's Choice voting
15:20 – 15:30	Concluding Remarks and People's Choice award announcement
15:30 – 15:45	Afternoon tea break

SESSION 3 (CONCURRENT STREAMS)

Monday 15 November: 1:30pm – 3:30pm (POSTER II)

13:30 – 13:40	Welcome and Acknowledgement of Country Chairs: Nicole Messina, Murdoch Children's Research Institute and Ryan Tseng, University of Melbourne
13:40 – 15:30	E - POSTER SESSION II (concurrent)
13:40	Rational design of antisense oligonucleotides modulating the activity of TLR7/8 agonists Arwaf Alharbi, Centre for Innate Immunity and Infectious Diseases, Hudson Institute of Medical Research & Monash University (PhD)
13:45	Investigating the role of the unfolded protein response in Legionella pneumophila infection Manal Alshareef, Hudson Institute of Medical Research, Monash University / Saudi Arabian Cultural Mission (PhD)
13:50	The Development of a Novel Antimalarial Class with Slow to Moderate Erythrocytic Stage Activity Brodie Bailey, Chemical Biology & Infection and Immunity, Walter and Eliza Hall Institute (PhD)
13:55	Whole Body Analysis of Tissue-Resident Immune Cells Allison Clatch, Department of Microbiology and Immunology, Peter Doherty Institute, University of Melbourne (PhD)
14:00	Understanding the mechanisms regulating GILZ, a key determinant of immune responses Megan Cristofaro, Rheumatology Research Group, Centre for Inflammatory Diseases, School of Clinical Sciences, Monash University (PhD)
14:05	The role of RIP kinases in bacterial gut infection Vik Ven Eng, Centre for Innate Immunity and Infectious Diseases, Hudson Institute of Medical Research (PhD)
14:10	Molecular mechanisms of lipid presentation by CD1b and TCR recognition Rachel Farquhar, Department of Biochemistry and Molecular Biology, Monash University (PhD)
14:15	Differential activation of innate immune responses by Bacteroides fragilis and their outer membrane vesicles (OMVs) William Gilmore, Physiology, Anatomy and Microbiology, La Trobe University (PhD)
14:20	Integrated immune networks in SARS-CoV-2 infected pregnant women reveal differential NK cell and unconventional T cell activation Jennifer Habel, Department of Microbiology and Immunology, University of Melbourne (PhD)
14:25	Dendritic cell apoptotic bodies as antigen presenting vesicles within an Influenza A virus infection model Amy Hodge, Department of Biochemistry & Genetics, La Trobe Institute for Molecular Science (PhD)
14:30	Investigating the in vitro degradation behaviour of bistriazines, a potent novel antimalarial class

	Peiyuan Luo, Drug Delivery, Disposition and Dynamics, Global Health Therapeutic Program Area, Monash Institute of Pharmaceutical Sciences, Monash University (PhD)
14:35	Molecular regulation of CCR4 ligands by GM-CSF and ILI4 Tanya Lupancu, Department of Medicine, University of Melbourne (PhD)
14:40	The Design, Synthesis and Evaluation of Novel Metalloaminopeptidase Inhibitors as Antimalarial Agents Mahta Mansouri, Medicinal chemistry/Global Health Therapeutics Area, Monash Institute of Pharmaceutical Sciences (PhD)
14:45 – 14:50	People’s Choice voting
14:50 – 14:55	Concluding Remarks and People’s Choice award announcement
14:55 – 15:45	Afternoon tea break

SESSION 3 (CONCURRENT STREAMS)

Monday 15 November: 1:30pm – 3:30pm (POSTER III)

13:30 – 13:40	Welcome and Acknowledgement of Country Chairs: Yanie Tayipto, Walter and Eliza Hall Institute and Carlo Giannangelo, Monash Institute of Pharmaceutical Sciences
13:40 – 15:30	E - POSTER SESSION III (concurrent)
13:40	TREML4 receptor regulates inflammation and innate immune cell death during polymicrobial sepsis Joseph Menassa, La Trobe Institute for Molecular Science, La Trobe University (PhD)
13:45	Develop a Nanobody Platform to Enable High-Resolution Structural Determination of <i>Candida auris</i> ABC Transporter Protein CDR1 by Cryogenic Electron Microscopy (cryo-EM) Shukla Promite, Division of Biomedical Science and Biochemistry, Research School of Biology, ANU College of Science, The Australian National University (PhD)
13:50	The role of anti-malarial immunity in the spontaneous clearance of molecular-detectable <i>Plasmodium</i> spp. infection Merryn Roe, School of Population Health and Preventative Medicine, Malaria and Infectious Diseases Epidemiology Group, Burnet Institute & Monash University (PhD)
13:55	Advances in drug target characterization: A new UV-Vis spectroscopy approach for protein investigation Carlos Fernando Santos Martin, Department of Biochemistry and Genetics, La Trobe University (PhD)
14:00	Role of SOCS3b in zebrafish innate immunity Mohamed Luban Sobah, School of Medicine, Deakin University (PhD)
14:05	The hijacking of lipid synthesis during flavivirus infection Alice Trenerry, Department of Microbiology and Immunology, University of Melbourne (PhD)
14:10	<i>Salmonella</i> Typhimurium induces cIAP1 degradation to promote death in macrophages Madeleine Wemyss, Centre for Innate Immunity and Infectious Diseases, Hudson Institute of Medical Research (PhD)
14:15	Identification and characterisation of the pH-dependent membrane-targeting saltwater crocodile defensin CpoBD13 Scott Williams, Department of Biochemistry and Genetics, La Trobe Institute for Molecular Science (PhD)
14:20	The identification of addiction to a human kinase inhibitor in <i>Plasmodium falciparum</i> Tayla Williamson, School of Health and Biomedical Sciences, RMIT University (PhD)
14:25	The mechanisms of <i>P. aeruginosa</i> OMV biogenesis alters their cargo composition and biological functions Lauren Zavan, Department of Physiology, Anatomy and Microbiology, La Trobe University (PhD)

14:30	<p>Understanding natural immunity to pre-erythrocytic <i>P. vivax</i> proteins in a longitudinal cohort</p> <p>Kael Schoffer, Population Health and Immunity, Walter and Eliza Hall Institute of Medical Research, Research assistant</p>
14:35	<p>To vaccinate or not to vaccinate? COVID-19 vaccine intentions amongst priority groups in Victoria</p> <p>Darren Suryawijaya Ong, Vaccine Uptake Group, Murdoch Children's Research Institute, Research assistant</p>
14:40	<p>Association of prenatal antibiotics and mode of birth with otolaryngology surgery in offspring: A national data linkage study</p> <p>Isobel Todd, Infection and Immunity, Murdoch Children's Research Institute Research assistant</p>
14:45	<p>Changes in infection-related hospitalizations in children following pandemic restrictions: an interrupted time-series analysis of total population data</p> <p>Isobel Todd, Infection and Immunity, Murdoch Children's Research Institute, Research assistant</p>
14:48	<p>Dynamics of gut-resident lymphocytes</p> <p>Andreas Obers, Peter Doherty Institute, University of Melbourne, PhD student</p>
14:48 – 14:55	People's Choice voting
14:55 – 15:00	Concluding Remarks and People's Choice award announcement
15:30 – 15:45	Afternoon tea break

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SESSION 4

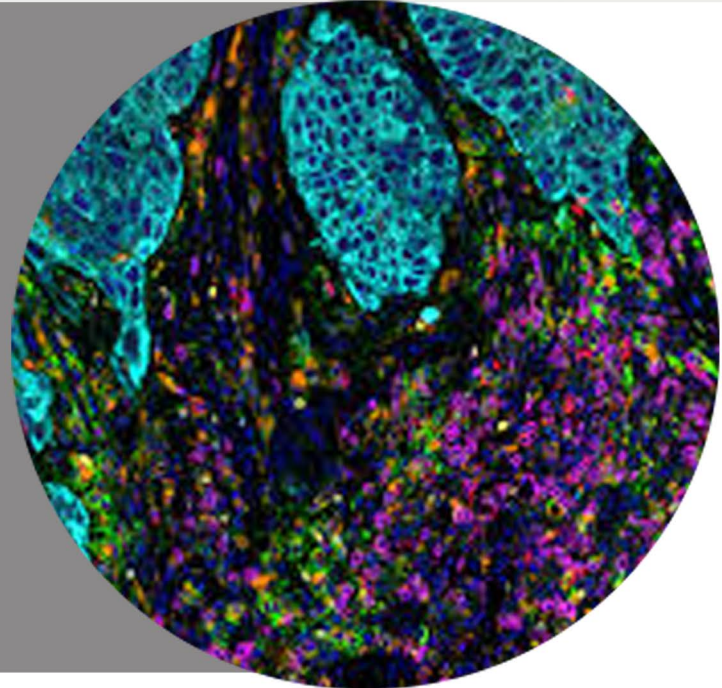
Monday 15 November: 3:45pm – 5pm

15:45 – 15:55	Welcome and Acknowledgement of Country Chairs: Jinxin Zhao, Monash University and Aaron Brice, Australian Centre for Disease Preparedness, CSIRO
15:55 – 16:00	Sponsor message – Crux Biolabs
16:00 – 16:35	ORAL PRESENTATIONS II
15:55	The good, the bad and the ugly: The functional IgA response in convalescent COVID-19 patients Samantha Davis, The Peter Doherty Institute for Infection and Immunity, University of Melbourne, University of Melbourne(PhD student)
16:05	High frequency human MLKL mutation causes innate immune response defects and hematopoietic dysfunction in CRISPR-cas9 generated mouse model. Sarah Garnish, Inflammation Division, Walter and Eliza Hall Institute (PhD student)
16:15	Durability of B-cell memory to SARS-CoV-2 infection and vaccination Gemma Hartley, Department of Immunology and Pathology, Monash University (PhD student)
16:25	The value of antibody avidity in malaria vaccine responses Jessica Horton, Disease Elimination, Burnet Institute, (PhD student)
16:35 – 16:55	SCIENCE BITES II
16:35	Molecular and functional mechanisms underlying age-related changes in influenza virus-specific CD8+ T-cells across human lifespan Carolien van de Sandt, Department of Microbiology and Immunology University of Melbourne at the Peter Doherty Institute (ECR)
16:38	Design of an Australian Facilities Survey on Management of Polioviruses and potentially infectious materials (PIMs) Simran Chahal, School of Medicine, Deakin University & Health and Biosecurity, CSIRO, Research assistant
16:41	P3-Mumbubvax intervention adaptation for general practitioners: a qualitative interview study Carol Jos, Vaccine Uptake Team, Murdoch Children's Research Institute, Research assistant
16:44	Antibody responses to P. falciparum transmission-stage antigens in participants following a human experimental malaria infection study Shirley Lu, Life Sciences, Burnet Institute, Research assistant
16:48	Functional and transcriptional differences in monocytes from children with obesity compared to children of healthy weight Siroon Bekkering, Inflammatory Origins AND Internal Medicine (resp.), Murdoch Children's Research Institute AND Radboud University Medical Center (The Netherlands) (ECR)
16:55 – 17:00	Sponsor message – BMG Labtech
17:00 – 17:05	Concluding Remarks and People's Choice Prize Announcement

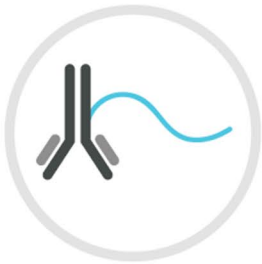
**Tuesday 16
November**

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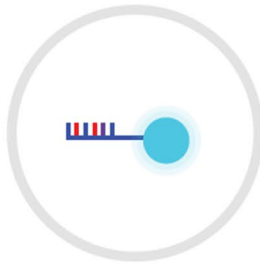


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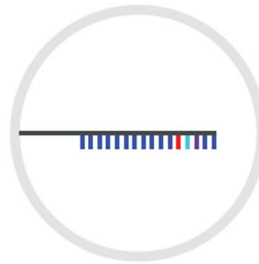
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Fluorophore conjugated oligonucleotides for visualization of CODEX antibodies

CODEX BARCODES



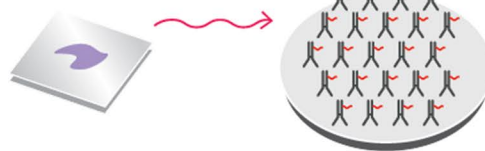
Activated oligonucleotides for easy conjugation of custom CODEX antibodies

3 MAIN COMPONENTS OF CODEX TECHNOLOGY

CODEX ANTIBODY PANEL



TISSUE STAIN

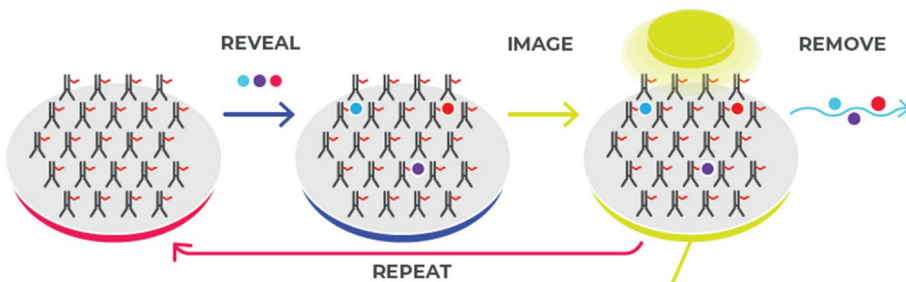


SINGLE-STEP STAINING TO PRESERVE SAMPLE INTEGRITY

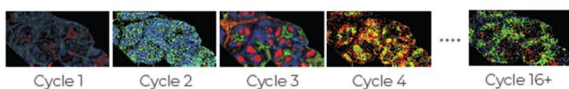
REVEAL

IMAGE

REMOVE



AUTOMATED PROCESS OF IMAGING BIOMARKERS USING THE CODEX INSTRUMENT AND A COMPANION MICROSCOPE



SENSITIVITY MEANS KNOWING

What will you do with a 1000-fold improvement?

Quanterix Single Molecule Arrays, Simoa

- 🦠 World's most sensitive digital ELISA platform
- 🦠 Capable of single-cell analysis – fg/ml sensitivity
- 🦠 Open platform- develop custom multiplex panels
- 🦠 Enabling analysis of previously undetectable analytes
- 🦠 Fully automated workflow

1

COVID-19 Cytokine Panels:

- Early warning system for cytokine storm¹
- Risk stratification & targeted therapeutics¹
- Multiplex profiling for complete cytokine picture²

2

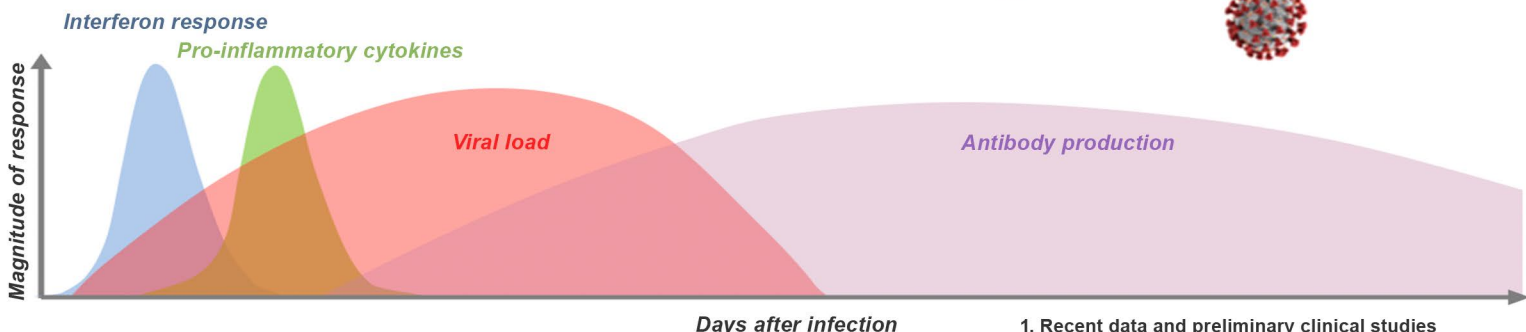
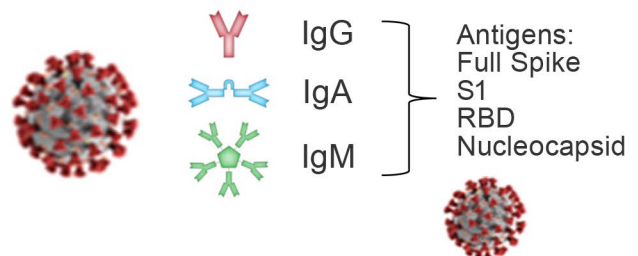
COVID-19 Antigen assay:³

- Potential for PCR-sensitivity for pre-symptomatic detection of virus
- Simple, fast immunoassay
- Quantitative measurement of viral load⁴

3

COVID-19 High Definition Serology:³

- Comprehensive profiling of Ab response
- Earliest detection of immune response
- Quantitative titer assessments
- Establish thresholds for protective immunity



1. Recent data and preliminary clinical studies
2. Complete Simoa cytokine menu
3. Products in development
4. Pre-immunity

SESSION 5

Tuesday 16 November: 9am – 11am

09:00 – 09:05	Welcome and Acknowledgement of Country Chairs: Catarina Almeida, University of Melbourne and Jason Paxman, La Trobe University
09:05 – 09:10	Sponsor message - Abcam
09:10 – 11:00	Careers Panel
09:10	Dr Anubhav Srivastava, Project Manager Dimerix Bioscience
09:25	Dr Jesse Toe, Investment Analyst, Life Sciences IP Group plc
09:40	Dr Hayley Joseph, Project Manager Australian Red Cross LifeBlood
09:55	Dr Yu-Wei Lin, Associate Director and Pharmacometrician, Certara
10:10	Dr Emma Petrie, Program Manager, Translational Research VCCC Alliance
10:25	Panel Q&A with audience
10:55 – 11:00	Concluding Remarks
11:00 – 11:15	Morning tea break

SESSION 6

Tuesday 16 November: 11.15am – 1pm

11:15 – 11:25	Welcome and Acknowledgement of Country Chairs: Linda Reiling, Burnet Institute and Joyanta Modak, Deakin University
11:25 – 11:55	Keynote Speaker II
11:25	Keynote speaker: Dr Michelle Boyle, QIMR-Berghofer Mechanisms of antibody development in human malaria infection
11:55 – 12:10	Technical Workshop – Geneworks Brenton Short Magic markers – Next Gen technologies for biomarker discovery
12:10 – 12:50	SCIENCE BITES III
12:10	The emerging role of lipid droplets acting as modulators for innate immune signalling Jay Laws, Department of Physiology Anatomy and Microbiology, La Trobe University (PhD)
12:13	Variations in microRNA length: a new source of disease biomarkers? Alexandra McAllan, Centre for Innate Immunity and Infectious Diseases, Hudson Institute of Medical Research (PhD)
12:16	Cyclopropyl amide antimalarials act by disrupting Plasmodium falciparum pyrimidine metabolism

	Abbey McCorquodale, Monash Institute of Pharmaceutical Sciences, Monash University (Honors)
12:19	Influenza infection of human macrophages Tina Meischel, Department of Microbiology and Immunology, University of Melbourne (PhD)
12:22	Single-cell analysis of $\alpha\beta$ versus $\gamma\delta$ T cell development Seungyoul Oh, St Vincent's Institute of Medical Research, University of Melbourne (PhD student)
12:25	Evading the host immune response in neuronal grafts using immune-cloaked human stem cell-derived midbrain dopamine progenitors Chiara Pavan, Florey Institute, University of Melbourne (PhD)
12:28	Defining the mechanisms of action of antibodies against Plasmodium vivax malaria Kaitlin Pekin, Burnet Institute, Monash University (Honors)
12:31	Profiling the antibody response 6 years following reduced-dose HPV vaccination in adolescent Fijian girls Chau Quang, Infection and Immunity, Murdoch Children's Research Institute (Masters)
12:34	Investigating the antimalarial activity of novel heterospirocyclic compounds in drug-resistant parasites Liana Theodoridis, Department of Physiology, Anatomy and Microbiology, La Trobe University (Masters)
12:37	Multi-Pronged CAR-T Cells To Eliminate Cutaneous T Cell Lymphoma In Vitro And In Vivo Van To, School of Clinical Sciences, Monash University/ Hudson Institute of Medical Research (PhD)
12:40	Inflammation dependent differentiation of two distinct VAT Treg populations shape systemic metabolism Santiago Valle Torres, Department of Microbiology and Immunology, The Peter Doherty Institute (PhD)
12:43	MAIT cells expand in the absence of NKT and $\gamma\delta$T cells Calvin Xu, Department of Microbiology and Immunology, University of Melbourne, (PhD student)
12:50 – 12:55	Sponsor message - Perkin Elmer
12:55 – 13:00	Concluding Remarks and People's Choice Prize Announcement

SESSION 7

Tuesday 16 November: 1.10pm – 2:10pm

13:10 – 14:10	Lunch with the speakers – separate sessions
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PLASMID PURIFICATION?

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SESSION 8

Tuesday 16 November: 2:20pm – 4.40pm

14:20 – 14:25	Welcome and Acknowledgement of Country Chairs: Laura Cook, University of Melbourne and San Lim, Hudson Institute of Medical Research
14:25 – 14:30	Sponsor message – Walter and Eliza Hall Institute of Medical Research
14:30 – 15:10	ORAL PRESENTATIONS III
14:30	Increased immunopathology and perturbed immune dynamics during influenza virus and arbovirus co-infection Isabelle Foo, The Peter Doherty Institute for Infection and Immunity, University of Melbourne, University of Melbourne (PhD student)
14:40	Structural Basis of Coronavirus E protein interactions with human PALS1 PDZ domain Airah Javorsky, Department of Biochemistry and Genetics, La Trobe University (PhD)
14:50	Influenza A virus causes maternal and fetal pathology via innate and adaptive vascular inflammation Osezua Oseghale, School of Health and Biomedical Science, RMIT University (PhD student)
15:00	Pomalidomide as an immunomodulatory agent to enhance NK cell anti-HIV immunity Rachel Pascoe, The Peter Doherty Institute for Infection and Immunity, University of Melbourne, University of Melbourne (PhD student)
15:00 – 15:15	Technical Workshop – Scientifix Nikki Tsoudis, Director and Co-founder of Scientifix Pty Ltd. Elegance in Simplicity. In-Fusion Cloning Fosters Boundless Imagination
15:15 – 15:50	ORAL PRESENTATIONS IV
15:15	Snotwatch: When data goes Viral Rana Sawires, Faculty of Medicine, Nursing and Health Sciences, Department of Paediatrics, Monash University (PhD student)
15:25	Mouse Mx1 inhibits HSV-1 at a Late stage in the Virus Replication Cycle Melkamu Tessema, Department of Microbiology and Immunology, University of Melbourne (PhD student)
15:35	Illuminating the chemical space for MR1-restricted ligands: a binding assay using fluorescence polarisation Carl Wang, Department of Biochemistry and Molecular Biology, Monash University (PhD student)
15:45	Lipid composition is altered in immune cells and impacts susceptibility to ferroptosis Pooranee Morgan, Baker Heart and Diabetes Institute, La Trobe University (PhD)
15:55	Immune responses in the respiratory tract and blood of COVID-19 patients reveal mechanisms of disease severity Wuji Zhang, Department of Microbiology and Immunology, University of Melbourne (PhD student)
15:55 – 16:00	Sponsor message - AGRF
16:00 – 16:05	Concluding Remarks and People's Choice Prize Announcement

**Wednesday 17
November**

GenScript's Antibody Services

Providing Comprehensive Custom Antibody Generation for Basic Research, Diagnostics, & Antibody Therapeutics



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SESSION 9

Wednesday 17 November: 9am – 11am

09:00 – 09:05	Welcome and Acknowledgement of Country Chairs: Rhea Longley, Walter and Eliza Hall Institute and Nicole Messina, Murdoch Children's Research Institute
09:05 – 09:10	Sponsor message – BMG Labtech
09:10 – 12:00	Communications workshop
09:10	Communicating science to the media Catherine Somerville, Senior Media Advisor, University of Melbourne
09:50	Effective communication of research for successful careers Dr Shane Huntington, CEO Little Big Steps
10:30	Q&A with speaker panel
10:55 – 11:00	Concluding Remarks
11:00 – 11:15	Morning tea break

SESSION 10

Wednesday 17 November: 11:15am – 2pm

11:15 – 11:20	Welcome and Acknowledgement of Country Chairs: Ursula Norman, School of Clinical Sciences, Monash University and Yanie Tayipto, Walter and Eliza Hall Institute
11:20 – 11:25	Sponsor message – John Morris Group
11:25 – 13:05	ORAL PRESENTATIONS SESSION V
11:25	A structural basis underpinning biased T cell receptor recognition of an immuno-dominant HLA-A2 restricted epitope from the SARS- CoV-2 spike protein Priyanka Chaurasia, Biomedicine Discovery Institute, Monash University (ECR)
11:35	Discrete tissue microenvironments instruct diversity in resident memory T cell function and plasticity Susan Christo, The Peter Doherty Institute for Infection and Immunity, University of Melbourne (ECR)
11:45	Increased basal and induced phosphoinositol-3-kinase signalling in B- and T-cells of healthy adults carrying the <i>PTPN22</i> R620W mutations Emily Edwards, Department of Immunology and Pathology, Monash University (ECR)
11:55	Circulating microRNA biomarkers enable accurate identification of COVID-19 patients Ryan Farr, Australian Centre for Disease Preparedness, CSIRO (ECR)
12:05	Single-cell landscape of tissue-resident memory T cell development

	Raissa Fonseca, Department of Microbiology and Immunology, University of Melbourne (ECR)
12:15	IL-23 in arthritic and inflammatory pain development Kevin Lee, Department of Medicine (RMH), University of Melbourne (ECR)
12:25	Chromate stress dysregulates <i>Pseudomonas aeruginosa</i> molybdenum homeostasis Eve Maunders, Department of Microbiology and Immunology, University of Melbourne (ECR)
12:35	Analysis of the Dynamics and Composition of Lipid Droplets During Viral Infection Ebony Monson, Department of Physiology, Anatomy and Microbiology, La Trobe University (ECR)
12:45	SARS-CoV-2 infection in children does not necessitate establishment of adaptive SARS-CoV-2-specific immunological memory Louise Rowntree, Department of Microbiology and Immunology, The University of Melbourne (ECR)
12:55	Repeated <i>Plasmodium falciparum</i> infection in humans drives the clonal expansion of an adaptive $\gamma\delta$ T cell repertoire Anouk von Borstel, Department of Biochemistry and Molecular Biology, Monash University (ECR)
13:05	People's Choice voting
13:10	Technical workshop – Genscript Biotech How Wing Leung, Field Application Scientist Optimizing target recognition for immune-based therapy and vaccine development
13:25 – 14:00	Concluding remarks and grand prize announcements VIIN Co-Convenors: <ul style="list-style-type: none"> • Professor Heidi Drummer, Burnet Institute and • Professor Paul Hertzog, Hudson Institute of Medical Research

SESSION 11

Wednesday 17 November: 6:30pm – 8.30pm

18:30 – 18:40	Welcome, House-keeping and Acknowledgement of Country
18:40 – 20:30	TRIVIA NIGHT

Notes

Capture and transmission of data: Please do not record or take photographs of any data slide in an oral presentation or Science Bite, or any data on a poster.

Social media:

TWITTER: We encourage you to join the conversation on Twitter with #YoungVIIN2021 and #viinyis. Please follow us @The_VIIN where we will be live tweeting symposium highlights.

SLACK: To chat to VIIN YIS organisers presenters and attendees join us on slack @ https://join.slack.com/t/viinyounginve-3mn2142/shared_invite/zt-yb827806-dJNmJCDMsxQc5a5s5rf4rQ

Please remember: no data! Thank you.

Registrations for the “Lunch with the speakers” and “Trivia night” remain open:

Lunch with the speakers: [Register here](#) (open until 4pm Monday)

Trivia night: [Register here](#) (open until 2.30pm Wednesday)