

**50th Annual Scientific Meeting of the Australian and New Zealand Society for Immunology 2022**  
**TUESDAY 29 November 2022 - FRIDAY 02 December 2022**  
 Melbourne Convention and Exhibition Centre

As at 29 November 2022  
 Tuesday, 29 November 2022

**Registration Desk Open**  
**Level 1**

**Plenary 1**  
**Plenary Session 1**

*Chairperson: Mark Chong, Kate Stacey, Diana Hansen*

**Opening Ceremony & Welcome to Country**

Plenary 1 - Unravelling the logic of microbiota-instructed T cell differentiation  
**Dan Littman**

Plenary 2 - Macrophages actin' up during inflammatory signalling  
**Kate Schroder**

**Equity Diversity & Inclusion Session**  
**Marguerite Evans Galea**

**Morning Tea**  
**Level 1**

**Concurrent Symposia Session 1**

Plenary 1	105&106	109&110	103	104	101&102	111&112
-----------	---------	---------	-----	-----	---------	---------

Plenary 1	105&106	109&110	103	104	101&102	111&112
<b>Tumour Immunology &amp; Immunotherapies</b>	<b>Infection &amp; Immunity</b>	<b>Innate Immunity</b>				
<i>Chairperson: Phillip Darcy, Rachel Zemek</i>	<i>Chairperson: Iona Schuster, Nicole Moreland</i>	<i>Chairperson: Marcia Munoz, Antonio Ferrante</i>				
11:00 Extending the applicability of CAR-T cells for hematologic malignancies <b>Helen Heslop</b>	460: RIPK1: a master regulator of cellular immunity and intestinal homeostasis and the risk of therapeutic targeting <b>Jaclyn Pearson</b>	Tricks to triggering TB traps <b>Anna Coussens</b>				
11:25 Targeting hypoxia to improve immunotherapy of solid tumours <b>Ian Hermans</b>	Dissecting interactions between malaria parasites and their host <b>Tania De Koning-Ward</b>	The last dance of a dying cell <b>Ivan Poon</b>				
11:50 Optimising CAR-T cell therapies for brain tumours <b>Lisa Ebert</b>	How macrophages shape innate immune responses during influenza A virus infection <b>Sarah Londrigan</b>	Brain-gut axis in stroke <b>Connie Wong</b>				
12:15 Enhancing cancer immunotherapy with systems immunology <b>Jason Waithman</b>	T cell vaccines against Zika virus <b>Branka Grubor-Bauk</b>	An immunometabolic switch that controls macrophage inflammatory and antimicrobial pathways <b>Matthew Sweet</b>				
12:40 Immune evasion by allogeneic transmissible cancers in Tasmanian devils <b>Andrew Flies</b>	29: A history of obesity increases influenza severity in NLRP3-dependent manner <b>Kirsty Short</b>	18: New innate lymphoid cell determinants of lung protection and homeostasis <b>Gabrielle Belz</b>				

**Lunch**  
**Level 1**

**101&102**

**ICB/CTI Board Meeting**

**109&110**

**Science Communication Session**

*Chairperson: Thomas Brodnicki*

New tricks to awake immunity against cancer  
**Gustavo Rodrigues Rossi**

Knowing where to go: the co-ordinated chaos of cell migration  
**Raymond Qin**

Move over orange! Cytokines are the new black  
**Marina Yakou**

Identification of Tissue-resident T cell responses in HIV+ patients at risk of developing HPV-driven anal cancer  
**Rehana Hewavisenti**

Retaining organ defences after transplantation  
**Sarah Dart**

Molecules derived from infectious microbes worsen ectopic bone formation after spinal-cord injury  
**Selwin Samuel**

Concurrent Themed Session 1							
	Plenary 1	105&106	109&110	103	104	101&102	111&112
	Tumour Immunology 1	T cells 1	Inflammation	Human & Clinical Immunology 1	COVID-19	Autoimmunity & Transplantation	Vaccines
	Chairperson: Anne Fletcher, Ankur Sharma	Chairperson: Rhys Allan, Iain Comerford	Chairperson: Andrew Murphy, Dani Dixon	Chairperson: Stuart Manning, Joanne Reed	Chairperson: Kirsty Short, Emma Grant	Chairperson: Helen Thomas, Raymond Steptoe	Chairperson: Amy Chung, Jennifer Juno
14:30	80: Interrogating the tumour microenvironment in hepatocellular carcinoma <b>Felix Marsh-Wakefield</b>	81: Mapping the commitment of haematopoietic progenitors to the T cell lineage <b>Dhruvi Parikh</b>	47: Ikbb Gain-of-Function results in NF-kB-mediated expansion of IL-17+ Tregs And psoriatic arthritis <b>Chelisa Cardinez</b>	42: Analysis of Receptor abundances in Multiple Sclerosis to determine treatment regime <b>Katharina Robichon</b>	112: Long-lived Anti-cytokine Autoantibodies Associated With Post-covid-19 Sequelae <b>Catherine Chen</b>	177: Multi-omic Profiling of Rogue Lymphocytes in Coeliac Disease <b>Raymond Louie</b>	90: immunization With Inactivated Whole Virus Particle Influenza Virus Vaccines Improves The Breadth Of Humoral Responses In Cynomolgus Macaques <b>Brendon Chua</b>
14:40	213: Control of anti-tumour immunity by the sympathetic nervous system <b>Sapna Devi</b>	118: Immunoprofiling of Natural Killer and T Cells Reveals Heterogeneity in Inhibitory and Activating Receptor Expression <b>Eric Alves</b>	93: Oxysterols drive inflammation via GPR183 during Influenza A virus and SARS-CoV-2 infection. <b>Cheng Xiang Foo</b>	119: Characterization of the pathoimmunology of necrotizing enterocolitis reveals novel therapeutic opportunities <b>Claudia Nold</b>	185: Increased abundance of type I and II interferon-expressing neutrophils during convalescence in individuals with previous severe COVID-19 <b>Dylan Sheerin</b>	323: Terminal T-cell exhaustion in islet antigen-specific CD8+ T cells prevents autoimmune diabetes <b>David De George</b>	92: Glycolipid-peptide conjugate vaccines elicit CD8+ T-cell responses and prevent breast cancer metastasis <b>Olivia Burn</b>
14:50	283: Dissecting the mechanisms of type I interferon-driven anti-tumour immunity to enhance cancer control <b>Hannah Newnes</b>	223: Human V $\gamma$ 9V $\delta$ 2+ T cell thymic development defined by distinct molecular changes. <b>Louis Perriman</b>	190: Inhibition of inflammatory immune cell trafficking into the CNS by a novel heparan sulfate mimetic <b>Tessa Peck</b>	157: Inflammatory T cells result in epithelial damage in patients with Crohn's disease <b>Gemma Laws</b>	148: Protein Vaccine Candidate based on the SARS-CoV-2 Spike Receptor Binding and N Terminal Domains Provides Protection in Mice against SARS-CoV-2 Variants of Concern <b>Isabelle Stewart</b>	331: Rare SH2B3 coding variants identified in lupus patients breach B cell tolerance and predispose to autoimmunity <b>Yaoyuan Zhang</b>	143: Mucosal immunization with a delta-inulin adjuvanted SARS-CoV-2 vaccine elicits lung-resident immune memory and protects mice against SARS-CoV-2 <b>Erica Stewart</b>
15:00	297: CD4+ T cells and the role of MHC class II expression in melanoma Immunovigilance. <b>Emma Bawden</b>	271: Human V $\gamma$ 9V $\delta$ 2 T cells develop within the postnatal thymus defined by distinctmolecular and cellular changes <b>Daniel Pellicci</b>	245: Diet at birth is critical to prevent early systemic inflammation, ensuring healthy growth independent of the microbiota <b>Valerie Verhasselt</b>	180: Somatic STAT5B and KRAS variants associated with a case of early-onset inflammatory bowel disease <b>Julia Forkgen</b>	282: Robust SARS-CoV-2 T cell immunity towards COVID-19 vaccines in blood cancer patients in the presence and absence of B cells <b>Oanh Nguyen</b>	390: PD-1+CD4+ T cells induce cross-tolerance to suppress islet-specific CD8+ T cells via modulation of cDC2s <b>Emma Hamilton-Williams</b>	199: Identifying key targets for CD8+ tissue-resident memory T cell based malaria vaccine <b>Zhengyu Ge</b>
15:10	373: Hematopoietic cell kinase signaling in tumour associated macrophages regulates tumour growth <b>Michael Murrey</b>	307: Interplay of type I and II interferons for the generation of CD8+ stem-like memory T cells <b>Benjamin Broomfield</b>	375: THE UNEXPECTED FORMATION OF "THE FOOTPRINT OF DEATH" DURING APOPTOSIS <b>Stephanie Rutter</b>	291: The role of regulatory T cells in remyelination, following kappa opioid receptor agonist treatment. <b>Mackenzie Kiernan</b>	292: High titre neutralizing antibodies in response to SARS-CoV-2 infection require RBD-specific CD4 T cells that include proliferative memory cells. <b>Chansavath Phetsouphanh</b>	408: Exploring the utility of antibody epitopes in predicting a relapsing disease course in MOGAD <b>Ganesha Liyanage</b>	231: Understanding immune responses towards COVID-19 BNT162b2 vaccines in Indigenous people <b>Wuji Zhang</b>
15:20	403: Pancreatic ductal adenocarcinoma genotype shapes tumour infiltration efficiency of cytotoxic T lymphocytes <b>Daryan Kempe</b>	479: Age-related cellular and molecular mechanisms limiting thymic regeneration <b>Daniel Gray</b>	336: Building a macrophage-based screen for identifying novel immunomodulatory compounds <b>Blake Sullivan-Hill</b>	381: Elucidation and treatment of ITK mediated autoimmunity through personalised medicine <b>Maurice Stanley</b>	458: Pre-existing interferon gamma responses condition the lung to support early control of SARS-CoV-2 infection <b>Kerry Hilligan</b>	482: Autoantibodies in Acute Rheumatic Fever: from pathogenesis insights to biomarker development <b>Nicole Moreland</b>	260: Improving mRNA vaccine-induced cellular immune responses with novel NKT cell agonists <b>Mitch Ganley</b>
15:30	412: Single-cell and spatially resolved analysis of tissues by integrated RNA and protein multi-omics identifies novel tumour-infiltrating lymphocyte phenotypes <b>Ghamdan Al-Eryani</b>	496: A novel role of GPR109A in thymic regulatory T cell development <b>Duan Ni</b>	470: The NLRP3 inflammasome is regulated by high temperature in an endogenous negative feedback mechanism that limits inflammation <b>Rebecca Coll</b>	468: T cells in the pleural effusion and peripheral blood of mesothelioma patients are phenotypically distinct <b>Nicola Principe</b>	530: A deep profiling of the SARS-CoV-2 immunopeptidome with a broad coverage of the viral genome <b>Asolina Braun</b>	505: B3GNT2 Dependant ligands are Essential to Uphold the Tolerance of IGHV4-34 and Prevent Autoantibody Secretion <b>Christopher Jara</b>	386: Human lymph node explant model for studying vaccine adjuvants <b>Vicki Stylianou</b>
15:40	497: The immune agonist anti-CD40 turns up the heat on immune cold colorectal cancer <b>Stephen Blake</b>	525: Our evolving understanding of the role of the $\gamma\delta$ T cell receptor in $\gamma\delta$ T cell immunity <b>Benjamin Gully</b>	471: Targeting MIF family cytokines to regulate inflammation <b>Jim Harris</b>	584: Investigating GAD65-CAR Tregs as a Novel Therapy for Type 1 Diabetes <b>Jacqueline Scaffidi</b>	539: A role for post-translationally modified T cell epitopes in immunity towards SARS-CoV-2 <b>Patricia Illing</b>	96: peptide-specific T Cell Allorecognition Suggests A New Approach For Preventing Transplant Rejection. <b>Nicole Mifsud</b>	455: Humoral epitope dominance and immune imprinting by SARS-CoV-1 and SARS-CoV-2 Vaccines <b>Deborah Burnett</b>
15:50	590: Cancer cells that undergo vasculogenic mimicry, can also express ICAM-1 and actively recruit circulating monocytes <b>Claudine Bonder</b>	531: Dendritic cell intrinsic Ezh2 expression maintains thymic homeostasis and prevents premature thymic involution <b>Sint Thida Bo</b>	557: Pro-survival protein A1 limits myeloid cell death and NLRP3 inflammasome activation <b>Kate Lawlor</b>		566: Pharmacological inhibition of TBK1/IKK $\epsilon$ blunts COVID-19 immunopathology <b>Michael Gantier</b>	193: The immune response to solid organ transplantation in peripheral lymphoid organs <b>Michaela Lucas</b>	568: Immunological memory response following reduced-dose pneumococcal vaccination schedule <b>Satvika Soppadandi</b>
Ground Floor							
Poster Session 1							
Plenary 1							
25th Anniversary Celebration of Peter Doherty & Rolf Zinkernagel's Nobel Prize							
Melbourne Public							
Welcome Reception							
16:00							
17:30							
Location							
18:30 - 20:00							

**50th Annual Scientific Meeting of the Australian and New Zealand Society for Immunology 2022**  
**TUESDAY 29 November 2022 - FRIDAY 02 December 2022**  
 Melbourne Convention and Exhibition Centre

As at 29 November 2022

**AEDT** Wednesday, 30 November 2022

**7:00** **Registration Desk Open**  
**Level 1**

**Room** **Plenary 1**  
**Plenary Session 2**

*Chairperson: Scott Mueller, Andrew Hamman, Matt Sweet*

**08:10** Plenary 3 - Molecular mechanisms of T cell exhaustion  
**John Wherry**

**08:50** Plenary 4 - Novel mechanisms of immune regulation: learning from viruses  
**Mariapia Degli-Esposti**

**09:30** Plenary 5 - Tissue Macrophage Heterogeneity  
**Florent Ginhoux**

**10:15** **Morning Tea**  
**Level 1**  
**111&112**

**10:15** **ASI Mentoring Program**  
**Concurrent Symposia Session 2**

	Plenary 1	105&106	109&110	103	104	101&102	111&112
	<b>T-Cells</b>	<b>Mucosal Immunology</b>	<b>Human &amp; Translational Immunology</b>				
	<i>Chairperson: Connie Jackaman, Simon Barry</i>	<i>Chairperson: Lisa O'Connor, Simon Phipps</i>	<i>Chairperson: Julia Elyard, Michaela Lucas</i>				
<b>11:00</b>	Programming T Cell Therapies with CRISPR <b>Alex Marson</b>	Cellular mechanisms of antibody induction to food allergens <b>Stephanie Eisenbarth</b>	IKBNS deficiency - a novel inborn error of immunity <b>Vanessa Bryant</b>				
<b>11:25</b>	Balancing diversity and specificity; rules for T cell receptor signalling <b>Nicole La Gruta</b>	Defining new molecular pathways in gastric B-cell MALT lymphoma associated with Helicobacter infection <b>Richard Ferrero</b>	Distinct neonatal immunity- implications for susceptibility to infection <b>Simone Schueller</b>				
<b>11:50</b>	STING activation promotes autologous type I interferon-dependent development of type 1 regulatory T cells during malaria <b>Christian Engwerda</b>	Small intestinal resident eosinophils maintain gut homeostasis following microbial colonisation <b>Nicola Harris</b>	Understanding the role of dysregulated PI3K signalling in immunodeficiency and immune dysregulation – differences between APDS1 and 2 <b>Elissa Deenick</b>				
<b>12:15</b>	T cell-bacteria interactions in Crohn's disease patients <b>Roslyn Kemp</b>	Multi-omics to elucidate the pathogenesis and define new therapeutics for respiratory disease <b>Philip Hansbro</b>	189: Understanding transcriptional heterogeneity of immune cells across many individuals using single cell studies <b>Kirsten Fairfax</b>				
<b>12:40</b>	11: Gene delivery of interleukin 2 protects against pathological neuroinflammation <b>Adrian Liston</b>	110: mucosal Inflammatory And Antibody Responses Associated With Protection And Disease After Human SARS-CoV-2 Challenge <b>Ryan Thwaites</b>	19: Human fetal immunity and microbial priming in early life <b>Archita Mishra</b>				

**13:00** **Lunch**  
**Level 1**  
**Plenary 1**

**13:30** **ASI Annual General Meeting**  
**Concurrent Themed Session 2**

	Plenary 1	105&106	109&110	103	104	101&102	111&112
	<b>T-Cells 2</b>	<b>Infection &amp; Immunity 1</b>	<b>Immunotherapies</b>	<b>Best of ICB/CTI Session</b>	<b>Human &amp; Clinical Immunology 2</b>	<b>B cells &amp; Comparative Immunology</b>	<b>Stromal Immunology, Immunometabolism &amp; Antigen</b>
	<i>Chairperson: Di Yu, Daniel Gray</i>	<i>Chairperson: Bernadette Saunders, Antje Blumenthal</i>	<i>Chairperson: Fernando Guimaraes, Yu Yu</i>	<i>Chairperson: Anne La Flamme, Rajiv Khanna</i>	<i>Chairperson: Umaimainthan Palendira, Bree Foley</i>	<i>Chairperson: Anselm Enders, Dimitra Zotos</i>	<i>Chairperson: Mireille Lahoud, Daryan Kempe</i>
<b>14:30</b>	56: A single regulatory T cell pool patrols the tissues <b>Oliver Burton</b>	168: Generating effective resident memory T cell immunity against malaria <b>Daniel Fernandez-Ruiz</b>	27: The immune checkpoint TIGIT limits anti-bacterial immunity and is a potential target for immunotherapy in infectious disease <b>Timothy Mcculloch</b>	596: Tolerance induction by liposomes targeting a single CD8 epitope IGRP 206-214 in a model of type 1 diabetes is impeded by co-targeting a CD4 + islet epitope <b>Irina Buckle</b>	136: Immunostaging to better predict the risk of relapse in stage III melanoma patients <b>Elnaz Tavancheh</b>	38: IL-21 acts beyond the immunological synapse to establish and sustain germinal center dynamics. <b>Isaak Quast</b>	135: Lymph node homeostasis and adaptation to immune challenge resolved by fibroblast network mechanics <b>Harry Horsnell</b>

14:40	247: Spatial dysregulation of T follicular helper cells impairs vaccine responses in ageing <b>Alyssa Silva Cayetano</b>	233: IRF7 deficiency explains life-threatening respiratory viral infections in otherwise healthy humans <b>Tessa Campbell</b>	78: Transgene doubles as a safety switch and selection marker for CAR T-cells <b>Patricia Rubio-Reyes</b>	597: The liver contains distinct interconnected networks of CX3CR+ macrophages, XCR1+ type 1 and CD301a+ type 2 conventional dendritic cells embedded within portal tracts <b>Kieran English</b>	139: GD2-specific Chimeric Antigen Receptor T cells for treatment of adult and childhood brain cancer <b>Tessa Gargett</b>	57: immune Cell Trafficking In Human Lymph Nodes <b>Saem Park</b>	145: Distinctive fibroblastic populations in tumors provide unique microenvironment for T lymphocytes <b>Jennifer Eom</b>
14:50	286: Core and pathogen-specific transcriptional networks of T follicular helper cells <b>Lennard Dalit</b>	270: Chemokines initiate the Herpes Simplex Virus relay through human DCs <b>Smith Jacinta</b>	138: Harnessing antibody drug conjugate-mediated pyroptosis to ignite anti-tumour immunity in mouse models of breast cancer <b>Nicole Wittwer</b>	598: Poor protective potential of influenza nucleoprotein antibodies despite wide prevalence <b>Hillary Vandervan</b>	146: High-dimensional flow cytometry analysis reveals distinct shifts in macrophage phenotypes following treatment with extracellular vesicles released by adipose-derived stem cells. <b>Kathryn Hally</b>	67: The role of Ki67 in early lymphocyte development <b>Zhoujie Ding</b>	335: 3D imaging and topological mapping of blood and lymphatic channel systems in entire murine lymph nodes <b>Inken Kelch</b>
15:00	378: Pim kinases modulate T cell homing and effector functions via transcriptional and translational mechanisms <b>Julia Marchingo</b>	277: High expression of CD38 and MHC class II on CD8+ T cells during severe influenza disease reflects bystander activation and trogocytosis <b>Xiaoxiao Jia</b>	160: CDK4/6 Inhibition Promotes Anti-tumor Immunity through the Induction of T-cell Memory <b>Emily Lelliott</b>	595: Allogeneic CD20-targeted $\gamma\delta$ T cells exhibit innate and adaptive antitumor activity in preclinical B cell lymphoma models <b>Kevin Nishimoto</b>	228: Working towards 95% global coverage for broadly cross-reactive influenza-specific CD8+ T cell immunity in Indigenous Australians <b>Louise Rowntree</b>	173: Local and recirculating memory B cells have distinct cellular dynamics, molecular, and cell fate potential <b>Rama Dhenni</b>	32: Microbiota-dependent metabolite butyrate induces Th1 polarisation and direct melanoma cell killing <b>Ariane Lee</b>
15:10	421: Poor maternal diet predisposes to allergic asthma in the offspring by perturbing the development of T-follicular helper cells in early life <b>Ismail Sebina</b>	341: Protective immune mechanisms induced by the RTS,S malaria vaccine in a paediatric phase IIb clinical trial <b>Lirije (lydia) Kurtovic</b>	169: ibrutinib Protects T Cells In Patients With CLL From Proliferation-induced Senescence. <b>Joanne Davis</b>	599: Inhibition of renal fibrosis with a human CXCL9-derived glycosaminoglycan-binding peptide <b>Fariba Poosti</b>	258: Longitudinal analysis of circulating immune cell subsets in melanoma patients treated with immune checkpoint inhibitor immunotherapy <b>Rebecca Simpson</b>	232: ZEB2 regulates the development of CD11c+ atypical B cells <b>Xin Gao</b>	427: HDAC7 is an immunometabolic switch in macrophages, interpreting different types of danger to engage inflammatory versus antimicrobial responses <b>Kaustav Das Gupta</b>
15:20	463: A unique epigenomic landscape defines CD8+ tissue-resident memory T cells <b>Raissa Fonseca</b>	406: Dissecting liver resident CD4 memory T cells and protection against liver stage malaria. <b>Lynette Beattie</b>	182: Investigating the Signalling and Function of CAR T-cells Containing a TLR2-derived Co-stimulatory Domain. <b>Yasmin Nouri</b>	679: A rapid whole-blood assay to detect SARS-CoV-2-specific memory T-cell immunity following COVID-19 vaccination <b>Katie Lineberg</b>	309: Type 2 immune polarization is associated with cardiopulmonary disease in preterm infants <b>Marcel Nold</b>	259: DOT1L is an essential epigenetic determinant for B-lymphopoiesis, the formation of germinal centres and effective antibody responses <b>Liam Kealy</b>	69: Unravelling the roles of haematopoietic thymic antigen presenting cells in unconventional T cell development <b>Yi Wang</b>
15:30	547: Discrete tissue microenvironments instruct diversity in resident memory T cell functionality <b>Susan Christo</b>	438: Dengue virus infection disturbs gastrointestinal barrier integrity function to exacerbate disease pathogenesis <b>Jaehyeon Kim</b>	207: Identifying Optimal Gene Promoters for CRISPR-HDR Generated Armoured CAR T cells <b>Kah Min Yap</b>		314: Deep Profiling of Chronic Lymphocytic Leukaemia (CLL) and Healthy Immune Cells by Mass Cytometry Resolves Impacts of Venetoclax Pressure <b>Charis Teh</b>	367: Epigenomic regulation of memory B cells in acute vs. chronic viral infection <b>Lucy Cooper</b>	114: Discovery of MR1-expressing cells in vivo <b>Jieru Deng</b>
15:40	558: Runx3 drives a CD8+ T cell tissue residency program that is absent in CD4+ T cells <b>Thomas Burn</b>	585: N-linked glycans shape skin immune responses and arthritic disease after intradermal infection with Ross River virus <b>Ali Zaid</b>	235: Systemic targeting of Pi3k delta with localised anti-LAG3 therapy is an effective anti-cancer approach with reduced immune-related adverse events. <b>Sarah Lauder</b>		410: Abnormal transcriptomic signature accompanies regulatory T cell deficiency in women with recurrent pregnancy loss <b>Kerrie Foyle</b>	417: Otitis-Prone children have reduced Haemophilus influenzae Protein D specific memory B-cells, and increased T follicular helper cells compared to non-otitis-prone children <b>Sharon Clark</b>	123: High Throughput ELISA Screen to Identify Novel cDC2 to Th2 Protein Interactions <b>Kaitlin Buick</b>
15:50	560: High Salt Diets Promote a TH17 cell Driven Gut-Bone Axis to Regulate Haematopoiesis and Atherosclerosis. <b>Olivia Cooney</b>	490: Understanding the role of PRC1 during CD8+ T cell responses to virus infection <b>Thomas Bruer</b>	296: Investigating the therapeutic efficacy of immunomodulator TEPP46 in Chronic Obstructive Pulmonary Disease (COPD) <b>Shatarupa Das</b>		430: Cell and tumour-region dependent progression in head and neck cancer revealed by high-dimensional spatial analysis <b>Angela Ferguson</b>	516: Expression of endogenous retroviral elements in devil facial tumour cells <b>Anuk Kruawan</b>	325: A novel role of antigen presentation by dendritic cell apoptotic bodies <b>Amy Hodge</b>
Ground Floor							
16:00	CSL Burnet Oration Reception / Poster Session 2						
Plenary 1							
17:30	Burnet Oration - The immune system: A beneficiary of sun exposure Prue Hart						

**50th Annual Scientific Meeting of the Australian and New Zealand Society for Immunology 2022**  
**TUESDAY 29 November 2022 - FRIDAY 02 December 2022**  
**Melbourne Convention and Exhibition Centre**

As at 29 November 2022  
 Thursday, 01 December 2022

**Registration Desk Open**  
**Level 1**

**Plenary 1**

**Plenary Session 3**

*Chairperson: Justine Mintern, Laura Mackay, Ranjany Thomas*

Plenary 6 - Cell Shape Sensing in Dendritic Cells

**Ana-Maria Lennon**

Plenary 7 - (Getting closer to) The truth about antigen abundance and T cell responses

**David Tscharke**

Plenary 8 - Transmembrane adaptor-mediated inflammatory signalling in macrophages

**Jennifer Stow**

**Morning Tea**

**Level 1**

**Pfizer New Investigator Session**

*Chairperson: Prue Hart, Meredith O'Keeffe*

179: A heterozygous kinase-dead mutation of Colony Stimulating Factor 1 Receptor results in a permissive environment for bone marrow donor cells to take up residence in multiple organs

**Jennifer Stables**

186: Defining the factors that strategically position memory T cells within lymph nodes

**Brigitte Duckworth**

230: CRISPR/Cas9 Engineering of Next Generation Armoured CAR T Cells

**Amanda Chen**

276: Development of induced pluripotent stem cell-derived natural killer cells targeting breast cancer cells

**Gustavo Rodrigues Rossi**

287: Differential NK cell and  $\gamma\delta$  T cell activation in SARS-CoV-2-infected pregnant women

**Jennifer Habel**

374: Immunosuppressive drugs differentially impact donor leucocyte retention following mismatched kidney transplantation in mice

**Sarah Dart**

**Concurrent Symposia Session 3**

**Plenary 1**

**105&106**

**109&110**

**103**

**104**

**101&102**

**111&112**

**B cells**

**Dendritic Cells & Antigen Presentation**

**Systems Immunology**

*Chairperson: Kim Good-Jacobson, Tina Nguyen*

*Chairperson: Sammy Bedoui, Georgina Clarke*

*Chairperson: Shalin Naik, Archita Mishra*

11:45

Germinal centres in ageing, how B cells lose their help  
**Michelle Linterman**

Neuronal Control of Cutaneous Inflammation  
**Dan Kaplan**

A systems vaccinology study to assess how innate and early adaptive responses to the BNT162b2 or ChAdOx1-S COVID-19 vaccines correlate with subsequent immunogenicity and reactogenicity  
**David Lynn**

12:10

B cells in Hyper IgE Syndrome  
**Cindy Ma**

Human cDC1 as cancer therapeutics  
**Kristen Radford**

Unravelling novel epigenetic mechanisms underpinning SARS-CoV-2 infection and implications for novel epi-therapies  
**Sudha Rao**

12:35

Novel mechanism of cell transformation in Chronic Lymphocytic Leukemia  
**Fabienne Mackay**

Dendritic cell signals that drive Th2 differentiation in skin  
**Franca Ronchese**

Dissecting the Cellular Composition During CAR T-cell Therapy Using Single Cell Multiomics  
**Fabio Luciani**

13:00

74: Fundamental differences in the transcriptome and phenotype of long-lived and newly formed plasma cells  
**Marcus Robinson**

Dendritic cells regulate the balance between immunity and homeostasis to inhaled antigens - distinguishing between the "harmful" and the "harmless"  
**Linda Wakim**

T cell fate determination  
**Sarah Russell**

13:30-

**Lunch**

**Level 1**

**101&102**

**Education Special Interest Group Workshop**

*Chairperson: Dr. Aude Fahrer, Dr Danica Hickey*

13:40

188: Combining an online simulation and face-to-face learning to teach laboratory concepts

**Maurizio Costabile**

13:50	506: Looking forward and back - how has COVID-19 changed our approach to teaching theoretical and laboratory immunology? <b>Maria DeMaria</b>						
14:00	304: Rubrics for assessing HDRs <b>Samy Sakkal</b>						
14:10	Education SIG and National Immunology Curriculum Open Forum						
<b>Concurrent Themed Session 3</b>							
	<b>Plenary 1</b>	<b>105&amp;106</b>	<b>109&amp;110</b>	<b>103</b>	<b>104</b>	<b>101&amp;102</b>	<b>111&amp;112</b>
	<b>Infection &amp; Immunity 2</b>	<b>Tumour Immunology 2</b>	<b>Mucosal Immunology</b>	<b>T cells 3</b>	<b>Innate Immunity</b>	<b>Structural &amp; Molecular Immunology</b>	<b>Late Breaking Abstracts - Concurrent Themed Session 3</b>
	<i>Chairperson: Isabelle Stewart, Inken Kelch</i>	<i>Chairperson: Paul Beavis, Claudine Bonder</i>	<i>Chairperson: Lisa Mielke, Severine Navarro</i>	<i>Chairperson: Olivia Burn, Ajith Vasanthakumar</i>	<i>Chairperson: Seth Masters, Kate Lawlor</i>	<i>Chairperson: Kevin Aaron Fenix, Matthew Call</i>	<i>Chairperson: Carolien van de Sandt, Nicole Mifsud</i>
14:30	24: Developing a new model of CD4-mediated Chlamydia clearance within the female reproductive tract <b>Stephen Mcorley</b>	45: Uncovering effector mechanisms of T cell-engaging bispecific antibody. <b>Mika Casey</b>	71: Laboratory mice with a wild microbiota generate strong acute allergic immune responses but these are regulated with chronic allergen exposures <b>Jonathan Coquet</b>	212: Butyrophilin 3A1 interacts with the Vγ9Vδ2+ T cell receptor <b>Tom Fulford</b>	113: Colostrum conditions successful development of type 2 innate lymphoid cells independently of the microbiota <b>Valerie Verhasselt</b>	16: Context-dependent effects of IL-2 rewire immunity into distinct cellular circuits <b>Carly Whyte</b>	618: Inherited human PD-1 deficiency impairs B cell-intrinsic and -extrinsic antibody responses <b>Stuart Tangye</b>
14:40	62: Group A streptococcal M-protein specific antibodies trigger carditis but not neurobehavioral changes in the rat autoimmune valvulitis model <b>Rukshan Ahamed Mohamed Rafeek</b>	53: Overexpression of memory associated transcription factors promotes chimeric antigen receptor T cell stemness and anti-tumour efficacy <b>Jack Chan</b>	84: The microbial metabolite indole-3-propionic acid protects against mitochondrial dysfunction in the airway epithelium and allergic asthma inflammation <b>Olaf Perdijk</b>	147: RNA binding protein HuR controls CD4+ T cell cytokine production in allergen driven mouse airway inflammation and human asthmatic endotypes <b>Ulus Atasoy</b>	166: PD-1 regulates ILC3-driven intestinal immunity and homeostasis <b>Cyril Seillet</b>	28: A new role for ZEB2 as a lineage fidelity checkpoint in human Th1 CD4+ cells. <b>Cheryl Brown</b>	611: Longitudinal analysis and treatment response of pathogenic B cells in Sjogren's syndrome <b>Joanne Reed</b>
14:50	111: Mechanistic insights into the induction of robust, long-lived, highly protective CD8+ liver Trm cells by glycolipid-peptide vaccination <b>Yu Cheng Chua</b>	60: Investigating the role of Histone Acetyl Transferases in T cell mediated tumour-immune responses <b>Lizzy Pijpers</b>	116: T cell responses to virus infection in the intestinal mucosa <b>Sarah Sandford</b>	161: Chimeric Antigen Receptor T cells: A piece of the puzzle for brain cancer <b>Misty Jenkins</b>	203: Bone-targeted osteoporosis drugs may also boost immune responses to pulmonary infection by acting on tissue-resident macrophages in the lung <b>Emma Fletcher</b>	36: Pre-mitotic genome re-organisation bookends the B cell differentiation process <b>Timothy Johanson</b>	613: Endogenous bystander killing mechanisms enhance the activity of novel FAP CAR-T cells against glioblastoma <b>Wenbo Yu</b>
15:00	125: remodelling Stromal Structure By B-lymphocytes Limits T-cell Activation In Lymph Node Of Mycobacterium Tuberculosis-infected Mice <b>Lina Daniel</b>	72: Leveraging dendritic cell: T cell interactions for improved anti-tumour immunity <b>Junyun Lai</b>	164: Mucosal-associated invariant T cells activate dendritic cells to promote T follicular helper cell differentiation and humoral immunity <b>Theresa Pankhurst</b>	176: t Cell Cytoskeletal Forces Shape Synapse Topography For Targeted Lysis Via Membrane Curvature Bias Of Perforin <b>Maté Biro</b>	312: Neutrophils regulate regional microglial morphology in post-stroke neuroinflammation <b>Brooke Wanrooy</b>	43: BCG vaccination is associated with a long-term DNA methylation signature in circulating monocytes <b>Boris Novakovic</b>	605: Investigating key aspects of NETs through imaging flow cytometry and machine learning-assisted Raman microscopy: A critical role for adhesion in ANCA-induced NET formation in vasculitis <b>Patrick Lelliott</b>
15:10	295: Impact of obesity on memory T cells responses to infection <b>Helena Horvatic</b>	209: Adoptive transfer of TSTEM CAR-T cells mediates improved persistence and tumor control <b>Joe Zhu</b>	281: Maternal PIGR deficiency predisposes to severe viral bronchiolitis by affecting the infant microbiome and neonatal immune development <b>Ridwan Rashid</b>	263: mTOR inhibition promotes T cell exhaustion <b>Daniel Utzschneider</b>	419: An intraoperative hydrogel for local delivery of innate immune agonists prevents cancer recurrence in multiple mouse models <b>Francois Xavier Rwandamuriye</b>	372: Molecular pathways of macrophage infection and activation in COVID-19 <b>Larisa Labzin</b>	634: Blocking the common beta chain of the receptors for IL-3, IL-5 and GM-CSF improves airway function and inhibits tissue remodelling in response to chronic inhaled allergen exposure <b>Damon Tumes</b>
15:20	330: Lung imaging reveals stroke-induced impairment in pulmonary intravascular neutrophil function, a response exacerbated with aging <b>Shu Wen Wen</b>	252: Multi-omic analysis of cutaneous T cell lymphomas reveals broad changes in cellular immunity induced by mono- and combination anti-PD-1 immunotherapy <b>David Glass</b>	346: The immunomodulatory metabolite itaconate suppresses the severity of chronic obstructive pulmonary disease <b>Ridhima Wadhwa</b>	290: Glucocorticoid Induced Leucine Zipper: Gatekeeper for CD8 T cell activation and anti-viral responses <b>Taylah Bennett</b>	466: Discovering new mechanisms controlling cGAS-STING signalling <b>Dominic De Nardo</b>	387: Dynamic peptide:MHC-I structures in the eye of the beholder <b>Matthew Witney</b>	622: Regulation of the Dendritic cell receptor Clec9A to enable cross-presentation of dead cell antigen. <b>Kirsteen Tullett</b>
15:30	562: A transcriptomic analysis of adult sepsis in the Emergency Department: Early neutrophil dysregulation, novel gene downregulation and transcriptomic heterogeneity. <b>Erkia Bosio</b>	424: HER2-Chimeric Antigen Receptor T cells show preclinical efficacy in xenograft DMG models <b>Alexander Davenport</b>	487: Distinct eosinophil subsets are modulated by agonists of the commensal-metabolite and vitamin B3 receptor GPR109A during allergic-type inflammation <b>Rossana Azzoni</b>	404: Feature preserving manifold approximation and projection (fateMAP) enhances single cell RNA-seq analysis of CD8 T cell <b>Yang Yang</b>	541: Innate immune sensing of proteotoxic stress <b>Sophia Davidson</b>	440: Characterisation of the TLR4 signalosome structure <b>Kate Stacey</b>	619: Intestinal smooth muscle hypertrophy and hypermotility contribute to hookworm Nippostrongylus brasiliensis clearance <b>Haozhe Wang</b>
15:40	521: Spatial molecular profiling of lung pathology in Mycobacterium tuberculosis infected mice to define tissue microenvironments and regulators of TB granulomas <b>Antje Blumenthal</b>	502: The functional potential of MAIT cells in human colorectal cancer <b>Jason Kelly</b>	554: Dietary protein increases T-cell-independent sIgA production through changes in gut microbiota-derived extracellular vesicles <b>Jian Tan</b>	426: Gain-of-function STAT3 mutations drive pathology in autoimmunity and leukemia by dysregulating cytotoxic CD8 T cells. <b>Etienne Farquhar</b>	563: Apoptotic cells drive innate regulatory responses in anti-inflammatory MSC therapy <b>Tracy Heng</b>	444: Molecular determinants of neonatal immune maturation in the first week of human life. <b>David M</b>	616: Temporal kinetics of functional antibody responses following naturally acquired Plasmodium vivax malaria infections <b>Rhea Longley</b>
15:50	567: RP105 cytoplasmic domain is essential for TLR2/105-mediated cytokine production by mycobacteria-infected macrophages <b>Leslie Dominguez Cadena</b>	527: T cell responses are induced to a highly restricted set of potential cancer antigens <b>Jessica Boulter</b>	551: Epitopes encoded by intestinal bacteria lead to cross-reactive B and T cell responses altering responses to vaccination <b>Todd Norton</b>	523: MYB orchestrates T cell exhaustion and response to checkpoint inhibition <b>Carlson Tsui</b>	578: Innate immune signalling pathways and danger-associated molecular patterns in regulating skin inflammation <b>Snehlata Kumari</b>	591: Discovery and functional validation of an autoimmune disease linked super-enhancer that regulates SATB1 <b>Katherine Brown</b>	608: Glycaemic variability impairs T-cell immunity to influenza A virus <b>Marcus Tong</b>
<b>Ground Floor</b>							
16:00	<b>Poster Session 3</b>						
	<b>Plenary 1</b>						
17:30	<b>Lafferty Debate</b>						
Location	<b>Plaza Ballroom</b>						
19:30-23:30	<b>Cocktail Reception</b>						

**50th Annual Scientific Meeting of the Australian and New Zealand Society for Immunology 2022**  
**TUESDAY 29 November 2022 - FRIDAY 02 December 2022**  
**Melbourne Convention and Exhibition Centre**

As at 29 November 2022

**AEDT** Friday, 02 December 2022

**8:30** **Registration Desk Open**  
**Level 1**

**Room** **Plenary 1**

**Plenary Session 4**

*Chairperson: Julia Marchingo, Miles Davenport, Daniel Pellicci*

**09:00** Plenary 9 - T cell fate determination

**Doreen Cantrell**

**09:40** Plenary 10 - Towards a cure for HIV: the role of immunotherapies

**Sharon Lewin**

**10:20** Plenary 11 - Butyrophilin-dependent phosphoantigen detection by human gamma-delta T cells

**Dale Godfrey**

**11:05** **Morning Tea**  
**Level 1**

**Concurrent Symposia Session 4**

**Plenary 1**

**105&106**

**109&110**

**Autoimmunity & Tolerance - Concurrent Symposia Session 4**

**COVID-19 - Concurrent Symposia Session 4**

**Structural & Molecular Immunology - Concurrent Symposia Session 4**

*Chairperson: Kirsten Fairfax, Emma Hamilton-Williams*

*Chairperson: Kerry Hilligan, Chansavath Phetsouphanh*

*Chairperson: Zhian Chen, Jerome Le Nours*

**11:45** Type 3 immune responses in neuroinflammation

**Anne Brüstle**

Vaccine development for Hepatitis C; two arms are better than one.

**Heidi Drummer**

Tuning chimeric antigen receptors with de novo-designed transmembrane domains

**Melissa Call**

**12:10** The role of portal tracts and associated myeloid cells in intrahepatic immunity

**Patrick Bertolino**

COVID-19: Immunovirological lessons from convalescence

**Anthony Kelleher**

Comparable CD8+ T cells response in COVID-19 vaccinated and recovered individuals is increased by booster

**Stephanie Gras**

**12:35** Translating Immunology into New Therapies for Liver Disease

**Sumaira Hasnain**

T cells in SARS-CoV-2 infection and vaccination

**Katherine Kedzierska**

Tissue Resident Plasma Cells: Understanding Diversity in the Humoral Immune System

**Stephen Nutt**

**13:00** The JAK/STAT pathway in type 1 diabetes

**Thomas Kay**

Immunological recall following breakthrough infection with SARS-CoV-2

**Adam Wheatley**

Programmed cell death-1 Ligand 2: Sidekick or Star?

**Michelle Wykes**

**13:30** **Lunch**  
**Level 1**

**Plenary 1**

**Plenary Session 5**

*Chairperson: Si Ming Man, Jaclyn Pearson, Gabrielle Belz*

**14:30** Plenary 12 - Pyroptosis: From antibacterial immunity to antitumor immunity

**Feng Shao**

**15:10** Plenary 13 - The roles of caspase-8 and cFLIP in cell death and inflammation

**Kim Newton**

**15:50** President's Lecture - Running to stand still: epigenetic restraint of virus-specific CD8+ T cell differentiation

**Stephen Turner**

**16:30** **Awards and Closing Ceremony**