

7:30	Registration Desk Opens		
7:30	Lake Room	Oxford Nanopore Technologies Breakfast Workshop	
8:45	Grand 1-4	Welcome to Country Conference Open	
9:00	Grand 1-4	Gene-environment interactions modulating brain function within and between generations - <u>Prof Anthony Hannan</u> , Florey Institute of Neuroscience and Mental Health Chair: <u>A/Prof Timothy Bredy</u> , Queensland Brain Institute <i>Elspeth McLachlan Plenary Lecture</i>	
10:00	Main Hall	Morning Tea, Exhibition and Poster Display	
	Grand 1-2 The diverse actions of stress on appetitive and anticipatory behaviour Chair: <u>Prof Chris Dayas</u> , University of Newcastle <i>Sponsored by University of Newcastle</i>	Grand 3-4 New models and research directions for ALS/MND Chairs: <u>Dr Adam Walker</u> , University of Queensland & <u>Dr Catherine Blizzard</u> , University of Tasmania <i>Sponsored by Queensland Brain Institute</i>	Element Synaptic & Neural Plasticity Chairs: <u>Dr Hannah Vanyai</u> , Walter & Eliza Hall Institute & <u>Prof Fred Meunier</u> , Queensland Brain Institute
10:30	CRH neurons show an innate precautionary response that is scaled by threat <u>Prof Jaideep Bains</u> , Hotchkiss Brain Institute, University of Calgary	The innate immune pathway for neuroinflammation in ALS <u>A/Prof Seth Masters</u> , The Walter and Eliza Hall Institute of Medical Research	10:30 Online- and offline-LTP underlying long-term memory <u>Prof Yasunori Hayashi</u> , Kyoto University
10:55	Midbrain ghrelin signalling regulates conflict behaviour in the Edinger-Westphal nucleus <u>Dr Leigh Walker</u> , The Florey Institute of Neuroscience and Mental Health	Cortical hyperexcitability drives ALS symptoms and pathology in mice <u>Dr Mouna Haidar</u> , The Florey Institute of Neuroscience and Mental Health	10:45 Functions of the dual synaptotagmin Ca2+ sensors in synaptic transmission <u>Dr Zhitao Hu</u> , University of Queensland
11:20	Investigating the neural mechanisms underscoring stress-induced binge eating <u>Roberta Anversa</u> , The Florey Institute of Neuroscience and Mental Health	Disease mechanisms and drug discovery in stem cell models of MND: past, present and future <u>A/Prof Lezanne Ooi</u> , University of Wollongong	11:00 The role of activity-dependent phosphorylation in the presynaptic function of α -synuclein - <u>Elvas Arvell</u> , Florey Institute of Neuroscience and Mental Health
11:45	Acute stress suppresses hunger-sensing Agrp neural activity <u>Prof Zane Andrews</u> , Monash Biomedicine Discovery Institute	Advanced patient-derived cell assays to improve pre-clinical and clinical trial drug validation <u>A/Prof Anthony White</u> , Queensland Institute of Medical Research	11:15 Ubiquitination of the GluA1 subunit of AMPA receptors is required for synaptic plasticity, memory and cognitive flexibility - <u>A/Prof Victor Anggono</u> , Queensland Brain Institute
12:10	Data Blitz <u>Noorya Ahmed</u> , John Curtin School of Medical Research; <u>Adélaïde Bernard</u> , University of California San Francisco; <u>Andrew Butler</u> , University of Melbourne; <u>Gabrielle Gregoriou</u> , University of Sydney.	Data Blitz <u>Negar Asadian</u> , University of Melbourne; <u>Thomas Lewis</u> , Menzies Institute for Medical Research; <u>Dr Ramesh Narayanan</u> , ANZAC Research Institute; <u>Benjamin Trist</u> , University of Sydney.	11:30 Amino acid transporter NTT4 is necessary for neurotransmitter recycling and normal memory retention - <u>Angela Nicolci</u> , Australian National University
12:30	Main Hall	Lunch, Exhibition and Poster Display <i>Meet-the-Editor of Brain Communications, Prof Tara Spire-Jones - Held next to Coffee Cart</i>	
	Grand 1-2 Breaking New Ground: The brain, its development and disease Chairs: <u>Sarah Stephenson</u> , Murdoch Children's Research Institute & <u>Dad Abu-Bonsrah</u> , Florey Institute of Neuroscience and Mental Health <i>Sponsored by Murdoch Children's Research Institute</i>	Grand 3-4 Glial dysfunction and morphological changes in neurodegenerative and neuroinflammatory diseases Chair: <u>Dr Erika Gyenyesi</u> , Western Sydney University <i>Sponsored by Florey Institute for Neuroscience and Mental Health</i>	Element Neuropsychiatric disorders & Mechanisms Chairs: <u>Dr Lizzie Manning</u> , University of Newcastle & <u>Prof Gavan McNally</u> , University of New South Wales
13:30	Cellular and molecular dynamics of the developing human prefrontal cortex. <u>Prof Ryan Lister</u> , Harry Perkins Institute of Medical Research	Deciphering the intricate glial response in Alzheimer's disease: evidence from preclinical models <u>Dr Caterina Scuderi</u> , Sapienza University of Rome	13:30 Constructing aversive emotional representations in the brain <u>Prof Joshua Johanesen</u> , RIKEN Center for Brain Science
13:55	3D organoids to study human brain development and disease. <u>A/Prof Silvia Velasco</u> , Murdoch Children's Research Institute	The cytokines interleukin-6 and interferon- α induce distinct microglia phenotypes <u>Dr Markus Hofer</u> , University of Sydney	13:45 Shifted Parvalbumin Interneuron States Elicit Posttraumatic Stress Disorder-like Memory in Autism - <u>Dr Shaam Al Abed</u> , Australian National University
14:20	Modelling Autism and Intellectual Disability disorders in Drosophila – of mechanisms and treatment strategies <u>Dr Mireia Coll Tane</u> , Radboud University Medical Center	Transcriptional profiling of human microglia and astrocytes in Alzheimer's disease <u>Dr Amy Smith</u> , University of Auckland	14:00 Discovery of synapse-specific RNA N6-methyladenosine readers associated with the consolidation of fear extinction memory - <u>Sachithrani Madugalle</u> , Queensland Brain Institute
14:45	Timing shapes the cerebral cortex during development and evolution <u>Dr Laura Fenlon</u> , University of Queensland	Can we limit CNS neuroinflammation by targeting Wnt signalling in oligodendroglia? <u>Dr David Gonsalvez</u> , Monash University	14:15 The role of the infralimbic cortex in social recognition <u>Prof Yong-Seok Lee</u> , Seoul National University
15:10	Data Blitz <u>Elizabeth Haines</u> , University of Queensland; <u>Ryan Keable</u> , University of New South Wales; <u>Dr Hannah Vanyai</u> , Walter & Eliza Hall Institute; <u>Kym McNicholas</u> , Adelaide University	Data Blitz <u>Shuyan Chen</u> , University of Melbourne; <u>Delyse McCaffrey</u> , Neuroscience Research Australia; <u>Dr Diane Moujalled</u> , Walter & Eliza Hall Institute; <u>Linda Nguyen</u> , University of Melbourne.	14:30 Projection-targeted photopharmacology reveals anxiolytic effects of mGluR2-mediated presynaptic inhibition of cortical inputs to the basolateral amygdala - <u>Dr Hermany Munquba</u> , Weill Cornell Medicine
15:30	Main Hall	Afternoon Tea, Exhibition and Poster Display	
16:00	Grand 1-4	A.W. Campbell Award Presentation - <u>Dr Mehdi Adibi</u> , Monash University Chair: <u>A/Prof Gila Moalem-Taylor</u> , University of New South Wales	
16:25	Grand 1-4	Nina Kondelos Award Presentation - <u>Prof Clare Parish</u> , Florey Institute of Neuroscience and Mental Health Chair: <u>Anthony Hannan</u> , Florey Institute of Neuroscience and Mental Health	
16:50	Grand 1-4	Illumina Neurogenomics Research Award Presentation - <u>A/Prof Rachel Hill</u> , Monash University Chair: <u>Prof Ryan Lister</u> , University of Western Australia	
17:00	Grand 1-4	Imaging synaptic changes in Alzheimer's disease - <u>Professor Tara Spire-Jones</u> , University of Edinburgh Chair: <u>Prof Peter Schofield AO</u> , Australasian Neuroscience Society, NeuRA <i>International Plenary Lecture</i>	
18:00	Main Hall	Welcome Reception	
20:00	Element	Early Career Quiz Night	

7:30	Registration Desk Open		
9:00	Grand 1-4	Understanding the brain through the nose - Prof John Bekkers, Eccles Institute of Neuroscience, Australian National University Chair: Dr Jana Vukovic, University of Queensland Lawrie Austin Plenary	
10:00	Main Hall	Morning Tea, Exhibition and Poster Display	
	Grand 1-2	Grand 3-4	Element
	Adaptation: neural basis of context-dependent sensory processing Chairs: Dr Daisuke Shimaoka, Monash University & Dr Maureen Hagan, Monash University Sponsored by Australian National University	Seedlings to forests: Growing a collaborative cerebrovascular research pipeline from the ground up. The StrokeCORE model. Chairs: Dr Michelle Rank, University of Melbourne & Dr Kirsten Coupland, University of Newcastle	Brain Injury & Repair Chairs: Dr Amy Smith, University of Auckland & A/Prof Michael Lardelli, University of Adelaide
10:30	Context-dependent sensory processing in larval zebrafish Prof Ethan Scott, Queensland Brain Institute, University of Queensland	Selenium supplementation rescues the cognitive and motor deficits observed in mouse models of stroke Dr Tara Walker, Queensland Brain Institute, University of Queensland	10:30 Music as a novel and non-invasive rehabilitative paradigm to promote motor, affect, and cognitive recovery after experimental traumatic brain injury - Dr Anthony Kline, University of Pittsburgh
10:55	The contribution of superior colliculus to sensory processing and behaviour Dr Saba Gharaei, Eccles Institute of Neuroscience, Australian National University	Characterising the bilateral carotid artery stenosis (BCAS) mouse model of vascular dementia Dr Quynh Nhu Dinh, La Trobe University	10:45 Targeting IL-6 trans-signalling to repair the injured brain Dr Emily Willis, University of Queensland
11:20	Evidence for two subcortical routes for visual motion perception in healthy adults Elise Rowe, University of Melbourne	Development of PSD95 inhibitors for acute ischemic stroke: From target discovery to Phase 3 trials Prof Michael Tymianski, Krembil Research Institute, Toronto Western Hospital, University of Toronto	11:00 Lack of the Sez6 protein, or inhibition of Sez6 ectodomain shedding, attenuates cocaine relapse Kathleen Teng, Florey Institute of Neuroscience and Mental Health, University of Melbourne
11:45	Balanced, Orientation-Dependent Dichoptic Masking in Visual Cortex Measured Using Electroencephalography (EEG) Dr Luke Hallum, University of Auckland	Smart nanomaterials and fusion molecules for targeted thrombolysis Prof Christoph Hagemeyer, Australian Centre for Blood Diseases, Monash University	11:15 Spectrin forms a periodic cytoskeleton within the epidermis to preserve axonal integrity Dr Sean Coakley, University of Queensland
12:10	Data Blitz Dr Phill Bokiniec, Max Delbrück Center; Dr Ekaterina Levichkina, University of Melbourne; Sandra Parker, University of Queensland; Katie Skeen, University of Adelaide.	Data Blitz Dr Liyu Chen, Queensland Brain Institute; Dr Jessica Fletcher, University of Tasmania; Sven Storch, University of Queensland; Sam van Bohemen, University of Sydney	11:30 The precision medicine ORG 34167 restores channel voltage dependence, normalises neuronal dysfunction and reduces epileptiform brain activity in an HCN1 developmental and epileptic encephalopathy - Dr Lauren Bleakley, Florey Institute of Neuroscience and Mental Health
12:30	Main Hall	Lunch, Exhibition and Poster Display	
12:30	Element	Brain Bee Final	
	Grand 1-2	Grand 3-4	Element
	Neuroscience Teaching Chair: Prof Kay Double, Brain and Mind Centre, University of Sydney Sponsored by Neuroscience Research Australia	Advances in Neurogenetic Techniques Chairs: Prof Nick Spencer, Flinders University & A/Prof Wendy Imlach, Monash University Sponsored by Walter and Eliza Hall Institute	Cognition & Memory Chairs: Dr William Turner, University of Melbourne & Prof Elizabeth Coulson, University of Queensland
13:30	Australian Neuroscience Teaching in Higher Education – Learnings From a National Survey Prof Gabrielle Todd, University of South Australia	Optogenetic repair in a genetic model of Parkinson's disease Prof Harald Janovjak, Flinders University	13:30 CA2 circuit mediating hippocampal modulation of cholinergic tone Prof Thomas McHugh, RIKEN Center for Brain Science
13:55	BioLab Collective - an Australian Laboratory Skills Video Library for the Molecular Biosciences A/Prof Jack Wang, University of Queensland	Development of optogenetic approaches to functionally dissect neuronal circuits. Prof Andrew Allen, University of Melbourne	13:45 Distinct prefrontal cortex activity in fear memory consolidation Dr Roger Marek, Queensland Brain Institute
14:20	How to enhance learning and engagement in neuroscience education: a showcase of open-access digital resources Dr Lila Landowski, University of Tasmania	Hybrid optical/electrical neural modulation A/Prof Rachael Richardson, Bionics Institute	14:00 Learning and metalearning in the cerebellum Prof Jennifer Raymond, Stanford University
14:45	NeuroLab – Integrated digital platform for lab delivery and education in cognitive and brain sciences Dr Bianca De Wit, Macquarie University	Optogenetic dissection of spinal sensory circuits A/Prof Brett Graham, University of Newcastle, Hunter Medical Research Institute	14:15 Multisensory integration in the Mouse Hippocampus Using Widefield Calcium Imaging Dechuan Sun, University of Melbourne
15:10	Data Blitz Dr Charlotte Clark, University of Melbourne; Dr Daniela Duc, Cortical Labs; Nathan Higgins, Monash University.	Data Blitz Dr Da Guo, Okinawa Institute of Science and Technology Graduate University; Dr Ramon Martinez-Marmol, University of Queensland; Danielle Warren, University of Wollongong; Yu Xiao, Duke-NUS Medical School.	14:30 Stimulus structure impacts neural population codes for motion in marmoset V1 and MT Dr Elizabeth Zavitz, Monash University
15:30	Main Hall	Afternoon Tea, Exhibition and Poster Display	
16:00	Grand 1-4	Neurosurgery on the experimental spectrum - Prof Christopher Lind, University of Western Australia Chair: Prof Janet Keast, University of Melbourne Eccles Plenary	
17:00	Element	Annual General Meeting	
18:00		Break	
19:00	Main Hall	Pre-Dinner Drinks	
19:30	Grand 1-4	Conference Dinner	
		Casual cocktail-style affair with roaming canapés	

8:45	Registration Desk Open		
	Grand 1-2 The new era of psychedelic neuroscience and pharmacotherapy: A multidisciplinary perspective Chairs: Dr Kyna Conn , Biomedicine Discovery Institute & Dr Lucy Palmer , The Florey Institute of Neuroscience and Mental Health <i>Sponsored by Monash University</i>	Grand 3-4 Advances in autonomic control of visceral organs Chairs: Prof John Furness , Florey Institute of Neuroscience & Dr Kelsi Dodds , Flinders Health and Medical Research Institute <i>Sponsored by University of Melbourne</i>	Element Neurodegenerative Disorders & Treatment Chairs: Sabrina Meikle , Monash University & A/Prof Giuseppe Verdile , Curtin University
9:30	Mechanisms and levels of explanation in psychedelic therapy Dr Chris Letheby , University of Western Australia	Do bladder sensory neurons have rhythm? TRPping over their interaction with cannabinoids Dr Stewart Ramsay , Flinders Health and Medical Research Institute	9:30 Ablation of type I interferon responses in astrocytes attenuates neuroinflammation in a mouse model of interferon-alpha-mediated neurotoxicity - Emina Hayashida , University of Sydney 9:45 SARS-CoV-2 infection and the presence of viral fusogens cause neuronal and glial fusion Dr Ramon Martinez-Marmol , Queensland Brain Institute 10:00 β -Glucocerebrosidase-1 (GBA1) signaling in CNS immune cells regulates inflammasome activation in Parkinson's disease - Nanthini Jayabalan , University of Queensland 10:15 Low intensity repetitive transcranial magnetic stimulation enhances remyelination by newborn and surviving oligodendrocytes in the cuprizone model of toxic demyelination - Tram Nguyen , Menzies Institute for Medical Research 10:30 Bruton's Tyrosine Kinase inhibition to target multiple neuropathological processes in Parkinson's disease Dr Richard Gordon , Royal Brisbane and Women's Hospital 10:45 Choroid plexus defects in Down syndrome brain organoids enhance neurotropism of SARS-CoV-2 - Dr Mohammed Shaker , University of Queensland 11:00 Secretory organelles and Golgi outpost structures in dendrites of human iPSC-derived neurons Lou Fourniere , University of Melbourne 11:15 SARS-CoV-2 drives NLRP3 inflammasome activation in human microglia Dr Eduardo Albornoz Balmaceda , University of Queensland
9:55	Neural mechanisms of psychedelic-induced altered states of consciousness A/Prof Adeel Razi , Turner Institute for Brain and Mental Health and Monash Biomedical Imaging, Monash University	Impact of long-term hypercapnia on peptidergic transmission in brain chemoreceptor regions Dr Natasha Kumar , University of New South Wales	
10:20	Psilocybin-Assisted Psychotherapy for Treatment-Resistant Anorexia Nervosa – PANOREXIA Trial Sarah-Catherine Rodan , Brain and Mind Centre & InsideOut Institute for Eating Disorders, University of Sydney	Chlamydia alters smooth muscle motility and sensory pathways in the female reproductive tract A/Prof Phil Jobling , University of Newcastle, Hunter Medical Research Institute	
10:45	Psilocybin improves cognitive flexibility and prevents pathological weight loss in female rats Dr Claire Foldi , Monash Biomedicine Discovery Institute	Understanding and manipulating the 'sacral vagus': a multi-functional nerve essential for pelvic organ regulation Prof Janet Keast , University of Melbourne	
11:10	Data Blitz Dr Kyna Conn , Biomedicine Discovery Institute, Monash University; Maria Kuznetsova , Florey Institute of Neuroscience and Mental Health; Yoshito Saito , Melbourne Neuropsychiatry Centre, University of Melbourne.	Data Blitz Dr Kelsi Dodds , Flinders University; Chalystha Yie Qin Lee , RMIT University; Narges Mahdavian , Monash University; Christine Saleeba , Macquarie University.	
11:30	Element		
11:30	Equity & Diversity Panel Session		
12:00	Lunch, Exhibition and Poster Display		
	Grand 1-2 Restructuring the striatal mosaic: macro and micro-circuit interactions in learning-related plasticity Chairs: Prof Bernard Balleine , University of New South Wales <i>Sponsored by University of New South Wales</i>	Grand 3-4 Gene therapy for neurological disorders Chairs: Prof Cliff Abraham , University of Otago & Dr Lucia Schweitzer , University of Otago <i>Sponsored by Celosia Therapeutics</i>	Element New Developments in Neuroscience Chairs: Dr John-Paul Fuller-Jackson , University of Melbourne & A/Prof Jana Vukovic , Queensland Brain Institute
13:00	A tale of two neuromodulators: timing and interaction of dopamine and acetylcholine in mechanisms of corticostriatal synaptic plasticity. Prof John Reynolds , University of Otago	Retinal gene therapy: current and future applications Dr Tom Edwards , University of Melbourne	13:00 Uncovering subtype specific intra-tumoural heterogeneity in brain cancer Dr Saskia Freytag , The Walter and Eliza Hall Institute 13:15 Using human iPSC-derived 3D organoids to model demyelination, oligodendrocyte dysfunction and microglial toxicity in Multiple Sclerosis - Dr Shwathy Ramesan , Florey Institute of Neuroscience and Mental Health 13:30 Pathological TDP-43 sequesters endogenous TDP-43 into dynamic nuclear assemblies or disease-reminiscent inclusions in cell models of ALS and FTD - Sean Keating , Queensland Brain Institute 13:45 A sporadic Alzheimer's blood-brain barrier model for developing ultrasound-mediated delivery of Aducanumab and anti-Tau antibodies - Joanna Wasielewska , QIMR Berghofer Medical Research Institute 14:00 Fluorophore-free optrodes: a new technique for sensing biopotentials Amr Al Abed , University of New South Wales 14:15 Proximity-labelling identifies targets of tau in glutamate receptor trafficking and memory formation Emmanuel Prikas , Flinders University 14:30 Synthetic Biological Intelligence: evidence of <i>in vitro</i> goal-directed learning within a simulated game-world Dr Brett Kagan , Cortical Labs 14:45 An <i>in vitro</i> neuronal computing module displays self-organised critical dynamics on complex task acquisition- Feroz Habibollahi Saatlou , University of Melbourne
13:25	Local D2- to D1-neuron transmodulation in the striatum and its role in goal-directed learning Dr Miriam Matamales , University of New South Wales	From gene therapy to neuroinflammation - human pluripotent stem cell-derived brain organoids as tools for modelling human neurological disease Dr Sam Nayler , Queensland Institute of Medical Research	
13:50	Serotonergic modulation of striatal circuits: from cell signaling to behavior Dr Raffaella Tonini , Istituto Italiano di Tecnologia	Gene therapy approaches in mouse models of Alzheimer's disease Sophie Mathiesen , University of Otago	
14:15	Monitoring the monitors: how cholinergic interneuron activity is controlled throughout striatal development. Dr Nathalie Dehorter , Eccles Institute of Neuroscience, Australian National University	Can we develop better gene therapy strategies by casting a wider cell net? A/Prof Debbie Young , University of Auckland	
14:40	Data Blitz Jonathon Jacobs , University of New South Wales; Shivam Kalhan , University of Melbourne; Dr Wei-Siang Liao , University of Queensland; Dr Hoanh Tran , Walter & Eliza Hall Institute;	Data Blitz Rachelle Balez , University of Wollongong; Natalie King , University of Tasmania; Nazzer Nazri , University of Adelaide; Montanna Waters , Florey Institute of Neuroscience and Mental Health.	
15:00	Main Hall		
15:00	Afternoon Tea, Exhibition and Poster Display		
15:30	Grand 1-4 Deciphering the role of autism genes in cortical development: from stem cells to synapses - Prof Helen Cooper , Queensland Brain Institute Chair: Prof Kaylene Young , University of Tasmania <i>ANS Plenary</i>		
16:30	Grand 1-4 Presentation of Awards and Conference Close Chairs: A/Prof Jess Nithianantharajah & Prof Zane Andrews , Co-Chairs, Local Organising Committee, Australasian Neuroscience Society		