

DAY 1 - MONDAY 5 DECEMBER					
0730 - 1800		Registration Desk Open			
0730 - 0830	1hr	Oxford Nanopore Technologies Breakfast Workshop			
0845 - 0900	15m	Welcome to Country Conference Open			
0900 - 1000	1hr	Plenary 1 - Elspeth McLachlan Plenary (Grand 1-4) Gene-environment interactions modulating brain function within and between generations Professor Anthony Hannan, Florey Institute of Neuroscience and Mental Health, Melbourne			
1000 - 1030	30m	Morning Tea, Exhibition and Poster Display			
1030 - 1230	2hr	SYMPOSIUM/ORAL SESSION 1			
		Symposia 1 - The diverse actions of stress on appetitive and anticipatory behaviour Chair: Prof Chris Dayas, University of Newcastle (NSW, AUS) Room: Grand 1-2	Symposia 2 - New models and research directions for ALS/MND Chairs: Dr Adam Walker, University of Queensland (QLD, AUS) & Dr Catherine Blizzard, University of Tasmania (TAS, AUS) Room: Grand 3-4		
			Oral Session 1 - Synaptic & Neural Plasticity Chairs: Room: Element		
1030 - 1210	25m	CRH neurons show an innate precautionary response that is scaled by threat Jaideep Bains, Hotchkiss Brain Institute, University of Calgary (Alberta, CAN)	The innate immune pathway for neuroinflammation in ALS A/Prof Seth Masters, The Walter and Eliza Hall Institute of Medical Research (VIC, AUS)		
	25m	Midbrain ghrelin signalling regulates conflict behaviour in the Edinger-Westphal nucleus Dr Leigh Walker, The Florey Institute of Neuroscience and Mental Health (VIC, AUS)	Cortical hyperexcitability drives ALS symptoms and pathology in mice Dr Mouna Haidar, The Florey Institute of Neuroscience and Mental Health (VIC, AUS)		
	25m	Investigating the neural mechanisms underscoring stress-induced binge eating Roberta Anversa, The Florey Institute of Neuroscience and Mental Health (VIC, AUS)	Disease mechanisms and drug discovery in stem cell models of MND: past, present and future A/Prof Lezanne Ooi, University of Wollongong (NSW, AUS)		
	25m	Acute stress suppresses hunger-sensing AgRP neural activity Prof Zane Andrews, Monash Biomedicine Discovery Institute (VIC, AUS)	Advanced patient-derived cell assays to improve pre-clinical and clinical trial drug validation A/Prof Anthony White, Queensland Institute of Medical Research (QLD, AUS)		
1210 - 1230	20m	Blitz 1-4	Blitz 1-4		
				1030 - 1045	Online- and offline-LTP underlying long-term memory Prof Yasunori Hayashi
				1045 - 1100	Functions of the dual synaptotagmin Ca ²⁺ sensors in synaptic transmission Zhitao Hu
				1100 - 1115	The role of activity-dependent phosphorylation in the presynaptic function of α-synuclein Elysa Carr
1230 - 1330	1hr	Lunch, Exhibition and Poster Display	1115 - 1130	Ubiquitination of the GluA1 subunit of AMPA receptors is required for synaptic plasticity, memory and cognitive flexibility Victor Anggono	
				1130 - 1145	Amino acid transporter NTT4 is necessary for neurotransmitter recycling and normal memory retention Angela Nicoli
				1145 - 1200	BoNT/A targets Synaptotagmin 1-ganglioside-SV2 plasma membrane nanoclusters for synaptic vesicle entry and neurotoxication Merja Joensuu
				1200 - 1215	A novel zebrafish axotomy model to study microglia morphophysiological diversity and its implications for the CNS Andres Vidal-Itriago
1215 - 1230	Modelling of a KCNQ2 variant causing early onset epileptic encephalopathy using human iPSC-derived neurons and mouse Miaomiao Mao				
1330 - 1530	2hr	SYMPOSIUM/ORAL SESSION 2			
		Symposia 3 - Breaking New Ground: The brain, its development and disease Chairs: Sarah Stephenson, Murdoch Children's Research Institute (VIC, AUS) & Dad Abu-Bonsrah, The Florey Institute of Neuroscience and Mental Health (VIC, AUS) Room: Grand 1-2	Symposia 4 - Glial dysfunction and morphological changes in neurodegenerative and neuroinflammatory diseases Chair: Dr Erika Gyengesi, Western Sydney University (NSW, AUS) Room: Grand 4-5		
			Oral Session 2 - Neuropsychiatric disorders & Mechanisms Chairs: Room: Element		
1330 - 1510	25m	Modelling Autism and Intellectual Disability disorders in Drosophila – of mechanisms and treatment strategies Prof Annette Schenck, Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center (Nijmegen, NL)	Deciphering the intricate glial response in Alzheimer's disease: evidence from preclinical models. Dr Caterina Scuderi, Sapienza University of Rome (Rome, IT)		
	25m	Cellular and molecular dynamics of the developing human prefrontal cortex Prof Ryan Lister, Harry Perkins Institute of Medical Research (WA, AUS)	The cytokines interleukin-6 and interferon-α induce distinct microglia phenotypes Dr Markus Hofer, University of Sydney (NSW, AUS)		
	25m	3D organoids to study human brain development and disease A/Prof Silvia Velasco, Murdoch Children's Research Institute (VIC, AUS)	Transcriptional profiling of human microglia and astrocytes in Alzheimer's disease. Dr Amy Smith, University of Auckland (Auckland, NZ)		
	25m	Timing shapes the cerebral cortex during development and evolution Dr Laura Fenlon, University of Queensland (QLD, AUS)	Can we limit CNS neuroinflammation by targeting Wnt signalling in oligodendroglia? Dr David Gonsalvez, Monash University (VIC, AUS)		
1510 - 1530	20m	Blitz 1-4	Blitz 1-4		
				1330 - 1345	Constructing aversive emotional representations in the brain Prof Joshua Johannesen
				1345 - 1400	Shifted Parvalbumin Interneuron States Elicit Posttraumatic Stress Disorder-like Memory in Autism Shaam Al Abed
				1400 - 1415	Discovery of synapse-specific RNA N6-methyladenosine readers associated with the consolidation of fear extinction memory Sachithrani Madugalle
1530 - 1600	30m	Afternoon Tea, Exhibition and Poster Display	1415 - 1430	The role of the infralimbic cortex in social recognition Prof Yong-Seok Lee	
				1430 - 1445	Projection-targeted photopharmacology reveals anxiolytic effects of mGluR2-mediated presynaptic inhibition of cortical inputs to the basolateral amygdala Hermany Munguba
				1445 - 1500	lncRNA as a therapeutic target in psychiatric disorders: A focus on antisense BDNF and addiction Kelly Clemens
				1500 - 1515	Effects of psychiatric disease and aging on FKBP5/1 expression are specific to cortical supragranular neurons Natalie Matosin
1515 - 1530	A critical mechanism for saturated free fatty acids in memory and learning Tristan Wallis				
1600 - 1625	25m	A.W. Campbell Award Presentation (Grand 1-4)			
1625 - 1650	25m	Nina Kondelos Award Presentation (Grand 1-4)			
1650 - 1700	10m	Illumina Neurogenomics Research Award Presentation (Grand 1-4)			
1700 - 1800	1hr	Plenary 2 - International Plenary (Grand 1-4) Imaging synaptic changes in Alzheimer's disease Professor Tara Spire-Jones, University of Edinburgh			
1800 - 2000	2hr	Welcome Reception (including General Poster Session and Trade Display)			
2000 - 2200	2hr	Early Career Quiz Night (Element)			

DAY 2 - TUESDAY 6 DECEMBER						
0730 - 1930		Registration Desk Open				
0900 - 1000	1hr	Plenary 3 - Lawrie Austin Plenary (Grand 1-4) Understanding the brain through the nose Professor John Bekkers, Eccles Institute of Neuroscience, Australian National University				
1000 - 1030	30m	Morning Tea, Exhibition and Poster Display				
1030 - 1230	2hr	SYMPOSIUM/ORAL SESSION 3				
		Symposia 5 - Adaptation: neural basis of context-dependent sensory processing Chairs: Diasuke Shimaoka, Monash University (VIC, AUS) & Maureen Hagan, Monash University (VIC, AUS) Room: Grand 1-2	Symposia 6 - Seedlings to forests: Growing a collaborative cerebrovascular research pipeline from the ground up. The StrokeCORE model. Chairs: Dr Michelle Rank, University of Melbourne (VIC, AUS) & Dr Kirsten Coupland, University of Newcastle (NSW, AUS) Room: Grand 3-4	Oral Session 3 - Brain Injury & Repair Chairs: Room: Element		
1030 - 1210	25m	Context-dependent sensory processing in larval zebrafish Prof Ethan Scott, Queensland Brain Institute, University of Queensland (QLD, AUS)	Selenium supplementation rescues the cognitive and motor deficits observed in mouse models of stroke Dr Tara Walker, Queensland Brain Institute, University of Queensland (QLD, AUS)	1030 - 1045	Music as a novel and non-invasive rehabilitative paradigm to promote motor, affect, and cognitive recovery after experimental traumatic brain injury Anthony Kline	
	25m	Modulation of somatosensory cortex by the superior colliculus Dr Saba Gharaei, Eccles Institute of Neuroscience, Australian National University (ACT, AUS)	Trials and tribulations of translational stroke research: the importance of large animal models Annabel Sorby-Adams, University of Cambridge (Cambridge, UK)	1045 - 1100	Targeting IL-6 trans-signalling to repair the injured brain Emily Willis	
	25m	Evidence for two subcortical routes for visual motion perception in healthy adults Elise Rowe, University of Melbourne (VIC, AUS)	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 (Ontario, CAN)	1100 - 1115	Microglia dynamically interact with pericytes in the healthy and inflamed brain Catherine Foster	
	25m	Balanced, Orientation-Dependent Dichoptic Masking in Visual Cortex Measured Using Electroencephalography (EEG) Luke Hallum, University of Auckland (Auckland, NZ)	Smart nanomaterials and fusion molecules for targeted thrombolysis Prof Christoph Hagemeyer, Australian Centre for Blood Diseases, Monash University (VIC, AUS)	1115 - 1130	Spectrin forms a periodic cytoskeleton within the epidermis to preserve axonal integrity Sean Coakley	
1210 - 1230	20m	Blitz 1-4	Blitz 1-4	1130 - 1145	The precision medicine ORG 34167 restores channel voltage dependence, normalises neuronal dysfunction and reduces epileptiform brain activity in an HCN1 developmental and epileptic encephalopathy Lauren Bleakley	
				1145 - 1200	Molecular Neuropathologies from Altered RNA Splicing Mediated by Muscleblind-Like 2 During Brain Development in Mouse Model of Myotonic Dystrophy Chia-Wei Huang	
				1200 - 1215	Lack of the Sez6 protein, or inhibition of Sez6 ectodomain shedding, attenuates cocaine relapse Kathleen Teng	
				1215 - 1230	Thermal burn injury induces inflammatory and maladaptive neural plasticity processes in the brain Alex Tang	
1230 - 1330	1hr	Lunch, Exhibition and Poster Display Brain Bee Final TBC (Element)				
1330 - 1530	2hr	SYMPOSIUM/ORAL SESSION 4				
		Symposia 7 - Neuroscience Teaching Chair: Prof Kay Double, Brain and Mind Centre, University of Sydney (NSW, AUS) Room: Grand 1-2	Symposia 8 - Advances in Neurogenetic Techniques Chairs: Nick Spencer, Flinders University (SA, AUS) & Wendy Imlach, Monash University (VIC, AUS) Room: Grand 3-4	Oral Session 4 - Cognition & Memory Chairs: Room: Element		
1330 - 1510	25m	Australian Neuroscience Teaching in Higher Education – Learnings From a National Survey Prof Gabrielle Todd, University of South Australia (SA, AUS)	Optogenetic repair in a genetic model of Parkinson's disease Prof Harald Janovjak, Flinders University (SA, AUS)	1330 - 1345	CA2 circuit mediating hippocampal modulation of cholinergic tone Prof Thomas McHugh	
	25m	BioLab Collective - an Australian Laboratory Skills Video Library for the Molecular Biosciences A/Prof Jack Wang, University of Queensland (QLD, AUS)	Development of optogenetic approaches to functionally dissect neuronal circuits. Dr Mariana Del Rosso De Melo, University of Melbourne (VIC, AUS)	1345 - 1400	Distinct prefrontal cortex activity in fear memory consolidation Roger Marek	
	25m	How to enhance learning and engagement in neuroscience education: a showcase of open-access digital resources Dr Lila Landowski, University of Tasmania (TAS, AUS)	Hybrid optical/electrical neural modulation A/Prof Rachael Richardson, Bionics Institute (VIC, AUS)	1400 - 1415	Learning and metalearning in the cerebellum Prof Jennifer Raymond	
	25m	NeuroLab – Integrated digital platform for lab delivery and education in cognitive and brain sciences Bianca De Witt, Macquarie University (NSW, AUS)	Optogenetic dissection of spinal sensory circuits A/Prof Brett Graham, University of Newcastle, Hunter Medical Research Institute (NSW, AUS)	1415 - 1430	Multisensory Integration in the Mouse Hippocampus Using Widefield Calcium Imaging Dechuan Sun	
1510 - 1530	20m	Blitz 1-4	Blitz 1-4	1430 - 1445	Stimulus structure impacts neural population codes for motion in marmoset V1 and MT Elizabeth Zavitz	
				1445 - 1500	Activation of M1 cholinergic receptors in mouse somatosensory cortex enhances neuronal responses and improves detection behaviour Wricha Mishra	
				1500 - 1515	The synaptic engram Prof Bong-Kiun Kaang	
				1515 - 1530	Germline variants in tumor suppressor FBXW7 lead to impaired ubiquitination and a novel neurodevelopmental syndrome Sarah Stephenson	
1530 - 1600	30m	Afternoon Tea, Exhibition and Poster Display				
1600 - 1700	1hr	Plenary 4 - Eccles Plenary (Grand 1-4) Neurosurgery on the experimental spectrum Professor Christopher Lind, University of Western Australia				
1700 - 1800	1hr	ANS Annual General Meeting (Element)				
1800 - 1900	1hr	Break				
1900 - 1930	30m	Pre Dinner Drinks				
1930 - 2300	3.5 hr	Conference Dinner (Grand Ballroom 1-4)				

DAY 3 - WEDNESDAY 7 DECEMBER

1000 - 1600	Registration Desk Open				
0930 - 1130	2hr	SYMPOSIUM/ORAL SESSION 5			
Symposia 9 - The new era of psychedelic neuroscience and pharmacotherapy: A multidisciplinary perspective Chairs: Kyna Conn, Biomedicine Discovery Institute, Monash University (VIC, AUS) & Devon Stoliker, Turner Institute for Brain and Mental Health, Monash University (VIC, AUS) Room: Grand 1-2		Symposia 10 - Advances in autonomic control of visceral organs Chairs: Prof John Furness, University of Melbourne, The Florey Institute of Neuroscience and Mental Health (VIC, AUS) & Dr Kelsi Dodds, Flinders Health and Medical Research Institute, Flinders University (SA, AUS) Room: Grand 3-4			
		Oral Session 5 - Neurodegenerative Disorders & Treatment Chairs: Room: Element			
0930 - 1110	25m	Mechanisms and levels of explanation in psychedelic therapy Dr Chris Letheby, University of Western Australia (WA, AUS)	Do bladder sensory neurons have rhythm? TRPping over their interaction with cannabinoids Dr Stewart Christie, Flinders Health and Medical Research Institute, Flinders University (SA, AUS)		
	25m	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 (VIC, AUS)	Impact of long-term hypercapnia on peptidergic transmission in brain chemoreceptor regions Dr Natasha Kumar, University of New South Wales (NSW, AUS)		
	25m	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 (NSW, AUS)	Chlamydia alters smooth muscle motility and sensory pathways in the female reproductive tract A/Prof Phil Jobling, University of Newcastle, Hunter Medical Research Institute (NSW, AUS)		
	25m	Psilocybin improves cognitive flexibility and prevents pathological weight loss in female rats Dr Claire Foldi, Monash Biomedicine Discovery Institute (VIC, AUS)	Understanding and manipulating the 'sacral vagus': a multi-functional nerve essential for pelvic organ regulation Prof Janet Keast, University of Melbourne (VIC, AUS)		
1110 - 1130	20m	Blitz 1-4	Blitz 1-4		
				1030 - 1045	Bruton's Tyrosine Kinase inhibition to target multiple neuropathological processes in Parkinson's disease Richard Gordon
				1045 - 1100	Choroid plexus defects in Down syndrome brain organoids enhance neurotropism of SARS-CoV-2 Mohammed Shaker
				1100 - 1115	Secretory organelles and Golgi outpost structures in dendrites of human iPSC-derived neurons Jingqi Wang
1115 - 1130	SARS-CoV-2 drives NLRP3 inflammasome activation in human microglia Eduardo Albornoz Balmaceda				
1130 - 1200	30m	Equity & Diversity Committee Panel			
1200 - 1300	1hr	Lunch, Exhibition and Poster Display			
1300 - 1500	2hr	SYMPOSIUM/ORAL SESSION 6			
Symposia 11 - Restructuring the striatal mosaic: macro and micro-circuit interactions in learning-related plasticity Chairs: Bernard Balleine, Decision Neuroscience Laboratory, University of New South Wales (NSW, AUS) Room: Grand 1-2		Symposia 12 - Gene therapy for neurological disorders Chairs: Cliff Abraham, University of Otago (Dunedin, NZ) & Lucia Schweitzer, University of Otago (Dunedin, NZ) Room: Grand 3-4			
		Oral Session 6 - New Developments in Neuroscience Chairs: Room: Element			
1300 - 1440	25m	Amygdala-cortical control of striatal plasticity drives the acquisition of goal-directed action. Dr Simon Fisher, The Florey Institute of Neuroscience and Mental Health (VIC, AUS)	From gene therapy to neuroinflammation - human pluripotent stem cell-derived brain organoids as tools for modelling human neurological disease Sam Nayler, Queensland Institute of Medical Research (QLD, AUS)		
	25m	Local D2- to D1-neuron transmodulation in the striatum and its role in goal-directed learning Dr Miriam Matamales, Decision Neuroscience Laboratory, University of New South Wales (NSW, AUS)	Gene therapy approaches in mouse models of Alzheimer's disease Sophie Mathiesen, University of Otago (Dunedin, NZ)		
	25m	Serotonergic modulation of striatal circuits: from cell signaling to behavior Raffaella Tonini, Istituto Italiano di Tecnologia (Genova, IT)	Can we develop better gene therapy strategies by casting a wider cell net? Debbie Young, University of Auckland (Auckland, NZ)		
	25m	Monitoring the monitors: how cholinergic interneuron activity is controlled throughout striatal development. Nathalie Dehorter, Eccles Institute of Neuroscience, Australian National University (ACT, AUS)	Retinal gene therapy: current and future applications Tom Edwards, University of Melbourne (VIC, AUS)		
1440 - 1500	20m	Blitz 1-4	Blitz 1-4		
				1400 - 1415	Fluorophore-free optrodes: a new technique for sensing biopotentials Amr Al Abed
				1415 - 1430	Proximity-labelling identifies targets of tau in glutamate receptor trafficking and memory formation Emmanuel Prikas
				1430 - 1445	Synthetic Biological Intelligence: evidence of in vitro goal-directed learning within a simulated game-world Brett Kagan
1445 - 1500	An in vitro neuronal computing module displays self-organised critical dynamics on complex task acquisition Forough Habibollahi Saatlou				
1500 - 1530	30m	Afternoon Tea, Exhibition and Poster Display			
1530 - 1630	1hr	Plenary 5 - ANS Plenary (Grand 1-4) Deciphering the role of autism genes in cortical development: from stem cells to synapses Professor Helen Cooper, Queensland Brain Institute			
1630 - 1700	30m	Presentation of Awards and Conference Close (Grand 1-4)			