



# BUILDING BRIDGES

3-6 DECEMBER 2017  
INTERNATIONAL CONVENTION CENTRE | ICC SYDNEY



2017 MEETING OF THE  
**AUSTRALASIAN NEUROSCIENCE SOCIETY**  
37TH ANNUAL SCIENTIFIC MEETING

Conference Program

## DAY 1 – SUNDAY 3 DECEMBER

<b>10:15am – 7.00pm</b>	<b>Registration Desk Opens</b> <i>ICC Level 3 (outside the Gallery)</i>
<b>10:30am – 12:30pm</b>	<b>SESSION # 1 – Imaging workshop I</b> <i>ICC Level 3 Room C3.4/C3.5</i>
<b>Session Chair</b>	Phil Robinson (Children’s Medical Research Institute & The University of Sydney) and Joanne Jang (The University of Queensland)
10:30 – 11:15	Daniel Choquet (University of Bordeaux, France) <i>“Nanoscale imaging of synapse organization to understand function”</i>
11:15 – 11:35	Roland Brandt (University of Osnabrück, Germany) <i>“TBA”</i>
11:35 – 11:55	Fred Meunier (University of Queensland, Brisbane) <i>“Nanoscale organization of the exocytic machinery”</i>
11:55 – 12:15	Jean-Baptiste Sibarita (University of Bordeaux, France) <i>“Multidimensional quantitative single molecule imaging of biological structures”</i>
12:15 – 12:30	Ruth Redman (Carl Zeiss Microscopy GmbH, Singapore) <i>“2D and 3D light and electron correlative microscopy study of neuronal spine formation”</i>
<b>12:30pm – 1:30pm</b>	<b>Lunch</b>
<b>1:30pm – 3:30pm</b>	<b>SESSION # 2 – Imaging workshop II</b> <i>ICC Level 3 Room C3.4/C3.5</i>
<b>Session Chair</b>	Roland Brandt (University of Osnabrueck, Germany) and Alexandra Suchowerska (The University of New South Wales)
1:30 – 2:15	Yunichi Nabekura (National Institute for Physiological Sciences, Japan) <i>“TBA”</i>
2:15 – 2:30	Sandra Fok (University of New South Wales) <i>“Tissue clearing techniques”</i>
2:30 – 2:45	John Van Horn (USC Mark and Mary Stevens Neuroimaging and Informatics Institute) <i>“Analysis of white matter connectivity affirms the claustrum as a member of the rich club network of the human brain.”</i>
2:45 – 3:00	Merja Joensuu (Queensland Brain Institute, The University of Queensland) <i>“Visualizing endocytic recycling and trafficking in live neurons by subdiffractional tracking of internalized molecules”</i>
3:00 – 3:15	Sangwon Yoo (The University of Melbourne) <i>“Identifying neuropathological deficits in the cuprizone model of demyelination by utilising a novel imaging technique”</i>
3:15 – 3:30	Mark Hackett (Curtin University) <i>“Multi-modal imaging techniques to study the chemical biology of brain disease”</i>
<b>3:30pm – 5:30pm</b>	<b>ANS Student Body Committee Career Development Symposium</b> <i>ICC Level 3 Room C3.4/C3.5</i>
3:30 – 4:20	<b>Symposium 1: Grant and fellowship writing tips</b> Lezanne Ooi (University of Wollongong)
4:30 - 5:20	<b>Symposium 2: Post PhD pathways</b> Stu Fillman (Sanofi Genzyme) - Industry Dion Petorious (Science and Technology Australia) - Science communication 3rd Speaker - TBC
<b>6:00pm – 8:45pm</b>	<b>Welcome Reception, Exhibition &amp; Posters</b> <i>The Gallery (Level 3)</i>

## DAY 2 – MONDAY 4 DECEMBER

7:30am	<b>Registration Desk Opens</b>					
8:15am – 8:30am	<b>Opening Ceremony and Official Welcome</b> <i>Darling Harbour Theatre</i>					
8:30am – 9:30am	<b>Plenary 1 – ANS Plenary Lecture – Prof Jürgen Götz (Queensland Brain Institute, The University of Queensland)</b> <i>Darling Harbour Theatre</i>					
9:30am – 10:00am	<b>Morning Tea Break, Exhibition and Poster Displays</b> <i>The Gallery (Level 3)</i>					
10.00am – 12.00pm	<b>SESSION # 3 – Symposia</b>					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
	Symposium 1 <b>Getting nervous about immunity</b>	Symposium 2 <b>Breaking the boundaries of myelin pathology: what can we learn from different disease states</b>	Symposium 3 <b>Recent breakthroughs in the research towards the neuronal basis of consciousness</b>	Symposium 4 <b>Synapse under the nanoscope</b>	Symposium 5 <b>Why do we overeat? Unravelling the neuronal mechanisms underlying food intake</b>	Symposium 6 <b>Evolution and development of neocortical circuits</b>
Session Chairs	Keith Kelley (University of Illinois, USA)	Carlie Cullen (University of Tasmania)	Naotsugu Tsuchiya (Monash University)	Ramón Martínez-Mármol (The University of Queensland)	Robyn Brown (University of Melbourne)	Ilan Gobius (The University of Queensland)
10:00 – 10:30	William A. Banks (University of Washington, USA) <i>“The blood-brain barrier as an interface between the brain and the peripheral immune system”</i>	Anna Williams (Centre for Regenerative Medicine, Edinburgh, UK) <i>“Remyelination strategies in Multiple Sclerosis”</i>	Joel Pearson (The University of New South Wales) <i>“From hallucinations to the imagination: Seeing what’s not there and measuring it”</i>	Daniel Choquet (France) (Université Bordeaux) <i>“Nanoscale imaging of the synapse”</i>	Zane Andrews (Monash University) <i>“Central ghrelin receptor circuits in the hypothalamus and amygdala link metabolic state to mood and motivation”</i>	Leah Krubitzer (University of California, David) <i>“Cortical plasticity within and across lifetime: Contributions to the cortical phenotype”</i>
10:30 – 11:00	Erica K. Sloan (University of California Los Angeles, USA) <i>“Neural regulation of lymphatic vasculature: New mechanisms of immune regulation and tumor progression”</i>	Liz Milward (The University of Newcastle) <i>“Iron and myelin: shared mechanisms in rare and common brain disease”</i>	Makiko Yamada (National Institute for Quantum and Radiological Science and Technology, Japan) <i>“The emergence of positive illusion: integrating from molecules to neural responses, to the self”</i>	Merja Joensuu (The University of Queensland) <i>“Heterogeneous motion states of synaptic vesicles revealed by subdiffractive tracking of internalized molecules”</i>	Yeka Aponte (USA) (The Johns Hopkins University) <i>“Cracking neuronal circuits that drive survival behaviors using novel optical methods”</i>	Rodrigo Suárez (The University of Queensland) <i>“Evolution of cortical connectivity within and between hemispheres”</i>

## DAY 2 – MONDAY 4 DECEMBER

10.00am – 12.00pm	SESSION # 3 – Symposia continued					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
11:00 – 11:30	<b>Peter M. Grace</b> (University of Texas, USA) <i>“Central immune signaling as a regulator of pain chronicity”</i>	<b>Anthony Don</b> (University of Sydney) <i>“Loss of Myelin Lipid Homeostasis as a Key Sensitizing Factor for Alzheimer’s Disease”</i>	<b>Olivia Carter</b> (University of Melbourne) <i>“Pupil dilation as a means to assess consciousness and cognition in non-responsive patients”</i>	<b>Jürgen Götz</b> (The University of Queensland) <i>“Amyloid-β and Tau control Fyn lateral trapping in nanoclusters of dendritic shaft and spines respectively”</i>	<b>Antonio Verdejo-Garcia</b> (Monash Institute of Cognitive and Clinical Neurosciences) <i>“Brain reward system alterations in individuals with obesity”</i>	<b>Ken Ashwell</b> (University of New South Wales) <i>“Insights into the evolution of the mammalian neocortex from the study of monotremes”</i>
11:30 – 12:00	<b>Asya Rolls</b> (Israel) (Israel Institute of Technology, Israel) <i>“Activation of the brain’s reward system to control immunity”</i>	<b>Melinda Fitzgerald</b> (The University of Western Australia) <i>“Preventing myelin abnormalities and precursor cell loss in neurotrauma”</i>	<b>Marta Garrido</b> (The University of Queensland) <i>“Feedback loops in detecting (un)seen change”</i>	<b>Emma Sierrecki</b> (University of New South Wales) <i>“Molecular insights into a-synuclein aggregation gleaned by single molecule detection”</i>	<b>Denovan P Begg</b> (University of New South Wales) <i>“Transport of insulin into the CNS and its effects on energy balance and cognitive function”</i>	<b>David Reser</b> (Monash University) <i>“Clastrum connections to the cortical midline: A missing link in the evolution of cortical functional networks”</i>
12:00pm – 12:30pm	<b>Lunch, Exhibition and Poster Displays</b> <i>The Gallery (Level 3)</i>					
12:30pm – 1:45pm	<b>Australian and New Zealand Brain Bee Challenge – National Final</b> <i>Darling Harbour Theatre</i>					
1:45pm – 3:45pm	SESSION # 4 – Symposia and Oral Sessions					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
	LOC Symposia 7 <b>Cytoskeleton-dependent regulation of neuronal network formation</b>	Symposia 8 <b>Novel neural circuits and plasticity regulating stress and stressor responses</b>	Symposia 9 <b>Sensory neuroscience and bionics</b>	Oral 1 <b>Cognition and behavior I</b>	Oral 2 <b>Motor neuron disease I</b>	Oral 3 <b>CNS disease</b>
Session Chairs	<b>Fred Meunier</b> (The University of Queensland) <b>Thomas Fath</b> (The University of New South Wales)	<b>Sarah Spencer</b> (RMIT University) <b>Zane Andrews</b> (Monash University)	<b>Ingvars Birznieks</b> (The University of New South Wales) <b>Richard Vickery</b> (The University of New South Wales)	TBA	TBA	TBA

## DAY 2 – MONDAY 4 DECEMBER

1:45pm – 3:45pm	SESSION # 4 – Symposia and Oral Sessions continued					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
1:45 – 2:00	<p>Mike Fainzilber (Israel) (Weizmann Institute of Science, Israel)</p> <p><i>“Motor-Driven RNA Localization in Neuronalk”</i></p>	<p>Cecilia J. Hillard (Medical College of Wisconsin, USA)</p> <p><i>“Endocannabinoid signaling and glucocorticoid effects in the brain”</i></p>	<p>Sliman Bensmaia (University of Chicago, USA)</p> <p><i>“Biological and Bionic Hands: Natural Neural Coding and Artificial Perception”</i></p>	<p>Malinda Tantirigama (The Australian National University)</p> <p><i>“Cellular events critical for odour habituation in the mouse cortex in vivo”</i></p>	<p>Lezanne Ooi (University of Wollongong)</p> <p><i>“Increased phosphorylated and insoluble tau in induced pluripotent stem cell-derived motor neurons from amyotrophic lateral sclerosis patients”</i></p>	<p>Tertia Purves-Tyson (NeuRA)</p> <p><i>“Inflammatory cytokines are elevated in the midbrain in schizophrenia and following maternal immune activation”</i></p>
2:00 – 2:15				<p>Christina Perry (Florey Institute of Neuroscience and Mental Health)</p> <p><i>“Chronic alcohol produces specific cognitive deficit”</i></p>	<p>Shu Yang (Macquarie University)</p> <p><i>“Using ALS patient skin fibroblasts for the discovery and assessment of rapid diagnostic and prognostic biomarkers”</i></p>	<p>Yvette Wilson (The University Of Melbourne)</p> <p><i>“Characterization of the functional role of sez6l2, an autism candidate gene, in motor, social and cognitive behaviours”</i></p>
2:15 – 2:30	<p>Alla Kostyukova (USA) (Washington State University)</p> <p><i>“Structure and Function of Tropomodulins and their Role in Dendrite Formation”</i></p>	<p>Andrew M. Allen (The University of Melbourne)</p> <p><i>“Identification of pathways involved in the autonomic responses to interoceptive stressors”</i></p>	<p>David McAlpine (Macquarie University)</p> <p><i>“How the brain creates a sense of auditory space”</i></p>	<p>James Peak (University of New South Wales)</p> <p><i>“Projections from the dorsomedial striatum to the substantia nigra are important for goal-directed learning”</i></p>	<p>Merryn Brettell (University of New South Wales)</p> <p><i>“Novel mouse model of amyotrophic lateral sclerosis with a profilin 1 mutation”</i></p>	<p>Monica Langiu (Monash Institute Of Pharmaceutical Sciences; Florey Institute of Neuroscience &amp; Mental Health, Australia)</p> <p><i>“GPR88 modulates cognitive behaviour relevant to psychiatric disorders”</i></p>
2:30 – 2:45				<p>Khalid Khan (Kuwait University)</p> <p><i>“Effects of intraventricular infusion of quinolinic acid on spatial learning and memory in young rats”</i></p>	<p>Jacinta Conroy (The University Of Queensland)</p> <p><i>“A protective role for complement c3ar activation in sod1g93a mice”</i></p>	<p>Iain Perkes (University of New South Wales)</p> <p><i>“Pavlovian-to-instrumental transfer impairment in people with obsessive-compulsive disorder: compulsion-correlated orbitofrontal cortex hyperactivity and cortical disconnection”</i></p>

## DAY 2 – MONDAY 4 DECEMBER

1:45pm – 3:45pm	SESSION # 4 – Symposia and Oral Sessions continued					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
2:45 – 3:00	<p><b>Massimo Hilliard</b> (The University of Queensland) <i>“Role of the cytoskeleton in axonal maintenance”</i></p>	<p><b>Karl Iremonger</b> (University of Ot) <i>“Plasticity in hypothalamic stress circuits”</i></p>	<p><b>Mohit Shivdasani</b> (University of Melbourne) <i>“Bionic vision: First-in-human trial of a novel suprachorioidal retinal prosthesis”</i></p>	<p><b>Nathan Holmes</b> (School of Psychology, University of New South Wales) <i>“The molecular events underlying consolidation of newly formed and updated fear memories in the basolateral amygdala”</i></p>	<p><b>Marta Vidal</b> (Macquarie University) <i>“Identification of a novel extracellular isoform of fused in sarcoma (fus)”</i></p>	<p><b>Ben Gu</b> (The Florey Institute of Neuroscience and Mental Health) <i>“Multiple phagocytosis related factors underpin the pathogenesis of age-related macular degeneration”</i></p>
3:00 – 3:15				<p><b>Mihaela Iordanova</b> (Concordia University) <i>“Dopamine Transients in the Ventral Tegmental Area Reduce Prediction Error about Aversive Outcomes”</i></p>	<p><b>Prachi Mehta</b> (Macquarie University) <i>“Apolipoprotein D (APOD) as a potential new blood protein biomarker for motor neuron disease (MND)”</i></p>	<p><b>Hannah Loke</b> (Hudson Institute of Medical Research) <i>“Regulation and function of the y-chromosome gene, SRY, in an animal model of attention-deficit hyperactivity disorder (ADHD)”</i></p>
3:15 – 3:30	<p><b>Yazi Ke</b> (The University of New South Wales) <i>“Diverse Roles of Actin Regulation in Alzheimer Mice”</i></p>	<p><b>Chris Dayas</b> (University of Newcastle &amp; the Hunter Medical Research Institute) <i>“Optogenetic dissection of novel pathways controlling the HPA axis”</i></p>	<p><b>Americo Migliaccio</b> (The University of New South Wales &amp; NeuRA) <i>“Technical solutions to improve vision and balance in patients with injury to the balance organs”</i></p>	<p><b>Leigh Walker</b> (Florey Institute of Neuroscience And Mental Health) <i>“Pattern and phenotype of neural activation following yohimbine-induced reinstatement of alcohol seeking”</i></p>	<p><b>Anna King</b> (Wicking Dementia Research and Education Centre, University Of Tasmania) <i>“Regulation of the cytoskeleton by ALS/FTD protein TDP-43 and implications for neurodegeneration”</i></p>	<p><b>Jay Shukla</b> (The Florey Institute of Neuroscience And Mental Health/ University Of Melbourne) <i>“Brain region specific changes in metals and proteins in a mouse model of multiple system atrophy”</i></p>
3:30 – 3:45				<p><b>Wei Wei</b> (Queensland Brain Institute) <i>“DNA repair regulates temporal coding of gene transcription required for memory consolidation”</i></p>	<p><b>Jennifer Fifita</b> (Centre For Mnd Research, Macquarie University) <i>“Multidisciplinary strategies for discovery of novel MND genes”</i></p>	<p><b>Yan Li</b> (The Fourth Military Medical University) <i>“NDRG2 deficiency leads to attention deficits and hyperactive behaviors”</i></p>
3:45pm – 4:15pm	<p><b>Afternoon Tea, Exhibition and Poster Displays</b> <i>The Gallery (Level 3)</i></p>					

## DAY 2 – MONDAY 4 DECEMBER

4:15pm – 5:45pm	SESSION # 5 – Oral Sessions					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
	Oral 4 <b>Parkinson's disease</b>	Oral 5 <b>Glia</b>	Oral 6 <b>Cognition &amp; Behaviour II</b>	Oral 7 <b>Sensory systems</b>	Oral 8 <b>Motor neuron disease II</b>	Oral 9 <b>Genomics &amp; proteomics</b>
Session Chairs	TBA	TBA	TBA	TBA	TBA	TBA
4:15 – 4:30	Farzaneh Atashrazm (University of Sydney) <i>"Glucocerebrosidase activity in peripheral mononuclear cells from Parkinson's disease patients"</i>	Jana Vukovic (University of Queensland) <i>"Depletion of microglia improves spatial learning and promotes hippocampal neurogenesis following traumatic brain injury"</i>	Sarah-Jane Leigh (University of New South Wales) <i>"Oral minocycline hydrochloride reverses hippocampal-dependent cognitive impairment associated with cafeteria diet after the onset of obesity"</i>	Jason Ivanusic (The University of Melbourne) <i>"Piezo2 contributes to altered excitability of aδ bone marrow nociceptors"</i>	John Lee (University of Queensland) <i>"The pathogenic role of complement C5a receptor, C5aR1 in the SOD1G93A mouse model of motor neurone disease"</i>	Fleur Garton (University of Queensland) <i>"Multi-ethnic analyses of exome data for insight into the etiology of ALS"</i>
4:30 – 4:45	Jianqun Gao (The University of Sydney) <i>"Accumulation of endogenous alpha-synuclein following treatment of neurons with alpha-synuclein fibrils"</i>	Laura Morcom (Queensland Brain Institute) <i>"DCC signaling regulates glial cell morphology to initiate glial-mediated interhemispheric midline remodeling and corpus callosum formation"</i>	Jaisalmer De Frutos (Universidad Autónoma De Madrid) <i>"Does bilingualism affect functional connectivity in highly educated older adults?"</i>	Ehsan Kheradpezhoh (Australian National University) <i>"TRPA1 modulation of information processing in mice somatosensory cortex"</i>	Maxinne Watchon (The University of Sydney) <i>"Treatment with sodium valproate improves the motor behaviour of transgenic spinocerebellar ataxia-3 zebrafish"</i>	Guinevere Fernandes Lourenco Dale (University of New South Wales/NeuRA/The University of Sydney) <i>"Whole transcriptome analysis (RNA-Seq) reveals distinct gene and isoform expression profiles and alternative splicing defects in c9orf72-related and sporadic frontotemporal lobar degeneration (FTLD-TDP)"</i>
4:45 – 5:00	Yujing Gao (Murdoch Childrens Research Institute) <i>"Generation and characterisation of novel stem cell and mouse models to investigate the molecular basis of RAB39B-mediated Parkinson's disease."</i>	Anthony Boghdadi (Monash University) <i>"A novel transient glial interaction following ischaemic stroke in the marmoset"</i>	George Kalatzis (University of Technology Sydney (UTS)) <i>"Exploring cognitive function in diabetes and non-diabetes samples using electroencephalography (EEG) and psychometric assessment: a comparative study"</i>	Alexandria Driessen (University Of Melbourne) <i>"Airway sensory inputs to the paratrigeminal nucleus regulate cough and the perception of noxious airway irritations"</i>	Serene Gwee (Macquarie University) <i>"Aurora kinase B (AurkB) is involved in the modulating the neuronal development of zebrafish spinal motor neurons"</i>	Magdalena Przybyla (Dementia Research Unit, University of New South Wales) <i>"Identification of modifier genes that protect against tau induced diseases"</i>

## DAY 2 – MONDAY 4 DECEMBER

4:15pm – 5:45pm	SESSION # 5 – Oral Sessions continued					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
5:00 – 5:15	<p><b>Jin Sung Park</b> (Kolling Institute)</p> <p><i>“Therapeutic potential of nix-mediated mitophagy in PINK1/PARKIN-related Parkinson’s disease”</i></p>	<p><b>Junhua Xiao</b> (University Of Melbourne)</p> <p><i>“TrkB signaling in neurons regulates oligodendroglial development and CNS myelination”</i></p>	<p><b>Kathryn Baker</b> (School of Psychology, University of New South Wales)</p> <p><i>“A high-fat high-sugar diet-induced impairment of fear inhibition and place-recognition memory in adolescent rats”</i></p>	<p><b>Gilles Vanwalleghem</b> (The University of Queensland)</p> <p><i>“A whole-brain analysis of water-flow responses in larval zebrafish”</i></p>	<p><b>Mary-Louise Rogers</b> (Flinders University)</p> <p><i>“Urinary P75 neurotrophin receptor extracellular domain: a biomarker relevant to MND therapy development”</i></p>	<p><b>Paul Lockhart</b> (MCRI)</p> <p><i>“A novel method to identify pathogenic repeat expansions in exome and genome sequence datasets-enhancing the clinical utility of next generation sequencing”</i></p>
5:15 – 5:30	<p><b>Eduardo Albornoz Balmaceda</b> (University of Queensland)</p> <p><i>“The inflammasome component ASC plays a pathological role in Parkinson’s disease”</i></p>	<p><b>Georgina Craig</b> (The University of Melbourne)</p> <p><i>“New insights into the mode of oligodendrocyte production throughout development”</i></p>	<p><b>Rebecca Norris</b> (Florey Institute)</p> <p><i>“Mice lacking the synaptic protein neuroligin-3 show altered cognition in a battery of touchscreen tests”</i></p>	<p><b>Conrad Lee</b> (Australian National University)</p> <p><i>“Neuronal correlates of sensory prioritization in rats”</i></p>	<p><b>Martina Pignoni</b> (German Center for Neurodegenerative Diseases (DZNE))</p> <p><i>“Seizure protein 6 and its homolog seizure 6-like are main substrates of BACE1: validation and function”</i></p>	<p><b>Timothy Lynagh</b> (University of Copenhagen)</p> <p><i>“Evolution of acid-sensing ion channels”</i></p>
5:30 – 5:45	<p><b>Bolek Zapiec</b> (Max Planck Research Unit for Neurogenetics)</p> <p><i>“Three-dimensional reconstructions reveal a ventral glomerular deficit in Parkinson’s olfactory bulb”</i></p>	<p><b>Lulu Xing</b> (Monash University)</p> <p><i>“Neural progenitor cells contribute to regeneration of oligodendrocyte progenitor cells after pharmacogenetic ablation in the adult mouse brain”</i></p>	<p><b>Adam Walker</b> (Monash University)</p> <p><i>“Aspirin blocks cancer-induced cognitive impairment”</i></p>	<p><b>Naotsugu Tsuchiya</b> (Monash University)</p> <p><i>“Isoflurane reduces low-frequency feedback, but leaves high-frequency feedforward intact, in the fruit fly brain”</i></p>	<p><b>Vidya Krishnan</b> (The University of Western Australia)</p> <p><i>“Loss of VGLUT1 excitatory terminals on motor neurons in lumbar ventral horn of 27 months old male C57BL/6J mice”</i></p>	<p><b>Mark Graham</b> (Children’s Medical Research Institute)</p> <p><i>“Profiling presynaptic terminal depolarisation and post-stimulus using phosphoproteomics”</i></p>
5:45pm – 6:00pm	Break/Walking time					
6:00pm – 7:15pm	<p><b>Plenary 2 – Eccles Plenary Lecture – Prof Kathryn North (Murdoch Children’s Research Institute)</b> Darling Harbour Theatre</p>					
7:30pm – 9:30pm	<p><b>Student and Early Career Networking Evening</b> The Gallery Foyer (Level 3)</p>				<p><b>Drinks, Exhibition and Poster Displays</b> The Gallery (Level 3)</p>	
7:30	Welcome					
7:40	Round 1 commences – 4 x 10min sessions (2 min intro, 7 min Q&A, 1 min transition)					
8:20	Break for drinks/food					
8:40	Round 2 commences – 5x 10 min sessions					
9:30	Evening close/free time for participants to continue socialising					



## DAY 3 – TUESDAY 5 DECEMBER

7:30am	<b>Registration Desk Opens</b>					
7:00am – 8:00/8:30am	<b>Brain Bee Committee Meeting</b> <i>ICC Level 3 Room C3.1</i>		<b>ANS Equity Committee Meeting</b> <i>ICC Level 3 Room C3.2</i> <i>NB: Interested parties are invited to attend from 8am to ask questions and/or say "hello"</i>			
8:00am – 8:30am	<b>Exhibition and Poster Displays</b> <i>The Gallery</i>					
8:30am – 9:30am	<b>Plenary 3 – International Plenary Lecture – Prof Junichi Nabekura (National Institute of Physiological Sciences (NIPS) Japan)</b> <i>Darling Harbour Theatre</i>					
9:30am – 10:00am	<b>Morning Tea Break, Exhibition and Poster Displays</b> <i>The Gallery (Level 3)</i>					
10:00am – 12:00pm	<b>SESSION # 6 – Oral Sessions</b>					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
	Oral 10 <b>Dementia and aging</b>	Oral 11 <b>Auditory and visual</b>	Oral 12 <b>Neurodevelopment &amp; neuroanatomy</b>	Oral 13 <b>Injury and repair</b>	Oral 14 <b>Synaptic function and plasticity</b>	Oral 15 <b>Autonomic nervous system and metabolism</b>
<b>Session Chairs</b>	TBA	TBA	TBA	TBA	TBA	TBA
10:00 – 10:15	<b>Michael Lardelli</b> (The University of Adelaide) <i>"Aged vertebrate brains show a conserved failure to respond to hypoxia – a metabolic foundation for Alzheimer's disease?"</i>	<b>Sam Merlin</b> (Western Sydney University) <i>"Optogenetic silencing of feedback to primary visual cortex alters receptive field size and response gain"</i>	<b>Dhanisha Jhaveri</b> (The University of Queensland) <i>"Regulation and contribution of distinct neurogenic precursors in the adult mouse brain"</i>	<b>Jenny Gunnensen</b> (Anatomy and Neuroscience Department, University Of Melbourne) <i>"Peripheral nerve injury-induced heat hyperalgesia and TRPV1 responses are attenuated in mice lacking seizure protein 6 (SEZ6)"</i>	<b>Brian Billups</b> (Australian National University) <i>"Maintaining glutamatergic transmission: the role of presynaptic glutamine transport in the brainstem and hippocampus"</i>	<b>Michal Toborek</b> (University of Miami, School of Medicine) <i>"Bioenergetic regulation at the blood-brain barrier: role of occluding"</i>
10:15 – 10:30	<b>Arne Ittner</b> (University of New South Wales) <i>"Amyloid- toxicity in Alzheimer's mice is inhibited by site-specific phosphorylation of tau"</i>	<b>Nicholas Price</b> (Physiology, Monash University) <i>"Nonlinear temporal integration of visual motion"</i>	<b>Ebrahim Mahmoudi</b> (University of Newcastle) <i>"CIRC-Seq analysis revealed complexity of circular RNA expression in the brain with potential as miRNA sponges"</i>	<b>Rohan Walker</b> (University of Newcastle) <i>"Why hasn't the garbage been collected? Understanding the relative contributions of glymphatic flow and metabolic proteostasis in the accumulation of neurotoxic proteins within the brain post-stroke"</i>	<b>James Daniel</b> (Max Planck Institute of Experimental Medicine) <i>"Sumo1-modification of proteins is not observed at synapses"</i>	<b>Andrea Harrington</b> (University of Adelaide) <i>"Identifying spinal cord dorsal horn neurons activated by colorectal mechanosensory input"</i>

## DAY 3 – TUESDAY 5 DECEMBER

10:00am – 12:00pm	SESSION # 6 – Oral Sessions continued					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
10:30 – 10:45	<p><b>Rachelle Balez</b> (Illawarra Health and Medical Research Institute)</p> <p><i>“Altered distribution and neuroprotective effect of alpha-tocopherol in sporadic Alzheimer’s disease induced pluripotent stem cell derived neurons”</i></p>	<p><b>Ulrike Grunert</b> (University of Sydney)</p> <p><i>“Retinal ganglion cell types projecting to the pulvinar and superior colliculus in marmoset”</i></p>	<p><b>Wei Luan</b> (Queensland Brain Institute, The University of Queensland)</p> <p><i>“Maternal vitamin D treatment reverses maternal immune activation induced alterations in mesencephalic dopamine neurogenesis”</i></p>	<p><b>Jennifer Keller</b> (University of Melbourne)</p> <p><i>“Modelling sensory neuron plasticity in pulmonary disease using primary and stem cell derived sensory neurons”</i></p>	<p><b>Angelo Keramidias</b> (University of Queensland)</p> <p><i>“Inhibitory synapse deficits caused by familial alpha1 GABAA receptor mutations in epilepsy”</i></p>	<p><b>Paul Mirabella</b> (Monash University)</p> <p><i>“Glucose-sensing neurons of the mediobasal hypothalamus project to brown adipose tissue (BAT)”</i></p>
10:45 – 11:00	<p><b>Pratishtha Chatterjee</b> (Macquarie University)</p> <p><i>“Kynurenine pathway metabolites, as potential blood markers for the diagnosis of preclinical Alzheimer’s disease”</i></p>	<p><b>Leo Lui</b> (Monash University)</p> <p><i>“Fewer cells in the middle temporal area represent visual space inside the scotoma after chronic lesions of the primary visual cortex”</i></p>	<p><b>Angela Laird</b> (Macquarie University)</p> <p><i>“Exploring the role of micro rna-218 in motor neuron development”</i></p>	<p><b>Leon Teo</b> (Australian Regenerative Medicine Institute)</p> <p><i>“Reactivating infant scarring pathways to attenuate glial scarring and improve functional sparing after stroke in adults”</i></p>	<p><b>Dennis Cheung</b> (University of New South Wales, Sydney)</p> <p><i>“Upregulating KCC2 as a target for seizure therapies”</i></p>	<p><b>Mathusi Swaminathan</b> (University of Melbourne)</p> <p><i>“Mice lacking alpha-synuclein have altered cholinergic function in the colon”</i></p>
11:00 – 11:15	<p><b>Sonia Sanz Muñoz</b> (University Of Wollongong)</p> <p><i>“Extracellular apolipoprotein E 25 kDa n-terminal fragment formation is regulated by high-temperature requirement serine peptidase A1”</i></p>	<p><b>Eugenia Zhi Wei Poh</b> (The University of Western Australia)</p> <p><i>“Online repetitive transcranial magnetic stimulation during a visual learning task: differential impacts on visual circuit and behavioural plasticity in adult ephrin-A2A5-/- mice”</i></p>	<p><b>Zhe Zhang</b> (School of Biomedical Science, The University of Queensland)</p> <p><i>“Loss of the sulfate transporter SLC13A4 activity during neonatal development causes autism-like behaviours in adult mice”</i></p>	<p><b>Mian Bi</b> (Dementia Research Unit, University of New South Wales)</p> <p><i>“Tau depletion ameliorates NMDA-receptor mediated excitotoxicity and injury in stroke”</i></p>	<p><b>Sumasri Guntupalli</b> (Queensland Brain Institute)</p> <p><i>“GLUA1 subunit ubiquitination mediates amyloid- induced loss of surface AMPA receptors”</i></p>	<p><b>Lin Yung Hung</b> (University Of Melbourne)</p> <p><i>“Perturbation of gut bacteria by antibiotic vancomycin reduces serotonin production and disrupts enteric nervous system development in early postnatal mice”</i></p>
11:15 – 11:30	<p><b>Virginie Lam</b> (Curtin Health Innovation Research Institute)</p> <p><i>“Vitamin D, cerebrocapillary integrity and cognition in murine model of accelerated ageing”</i></p>	<p><b>Srdjan Vlajkovic</b> (The University of Auckland)</p> <p><i>“Purinergic signaling modulates aminoglycoside ototoxicity”</i></p>	<p><b>Andrew Shoubridge</b> (Sahmri)</p> <p><i>“A time-course study of dendritic spine morphology and density in a paediatric lysosomal storage disorder”</i></p>	<p><b>Hannah Timmins</b> (The University of Sydney)</p> <p><i>“Neurophysiological dysfunction associated with chemotherapy-induced peripheral neuropathy in cisplatin treated patients”</i></p>	<p><b>Jocelyn Widagdo</b> (The University of Queensland)</p> <p><i>“The activity-induced long non-coding RNA MEG3 modulates AMPA receptor surface expression in primary cortical neurons”</i></p>	<p><b>Khalid Elsaafien</b> (The Florey Institute of Neuroscience and Mental Health)</p> <p><i>“The role of the chemoattractant CCL2 and leukocytes in neurogenic hypertension”</i></p>

## DAY 3 – TUESDAY 5 DECEMBER

10:00am – 12:00pm	SESSION # 6 – Oral Sessions continued					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
11:30 – 11:45	Alexander Volkerling (School of Medical Sciences, University of New South Wales) <i>"LKB1 and tau phosphorylation in Alzheimer's disease"</i>	Jeremy Pinyon (University of New South Wales) <i>"Bionic array directed gene electrotransfer of a neurotrophin encoding plasmid free of antibiotic resistance genes enables cochlear nerve regeneration"</i>	Magdalena Lam (Macquarie University) <i>"The ultrastructure of spinal cord perivascular spaces: implications for the circulation of cerebrospinal fluid"</i>	Lin Kooi Ong (University of Newcastle) <i>"Somatotropin (growth hormone) as neuro-restorative therapy after stroke"</i>	Andrea Kwakowsky (University Of Auckland) <i>"Age- and gender-specific expression changes of GABAA receptor subunits in the human cortex"</i>	Alice McGovern (University of Melbourne) <i>"A novel role of the descending analgesia system in the regulation of vagal reflexes"</i>
11:45 – 12:00	Wickliffe Abraham (University of Otago) <i>"Glutamate receptor trafficking and protein synthesis mediate the facilitation of LTP by secreted amyloid precursor protein-alpha"</i>	Stephen Lomber (University of Western Ontario) <i>"Vocalization processing regions of auditory cortex mediate enhanced face discrimination abilities of the congenitally deaf"</i>	Charles Watson (University of Western Australia) <i>"Remarkable hippocampal CA1 expansion in terrestrial ungulates and carnivores"</i>	Rosina Giordano-Santini (Queensland Brain Institute, The University of Queensland) <i>"Behavioural consequences of neuronal cell-cell fusion"</i>	Kathryn Munro (The University of Melbourne) <i>"Knockout of seizure-related gene 6 (SEZ6) family proteins alters excitatory synapse formation, cognition and motor function"</i>	Ian Johnston (The University of Sydney) <i>"High fat high sugar diet increases impulsivity"</i>
12:00pm – 1:30pm	<b>Lunch, Exhibition and Poster Displays</b> <i>The Gallery (Level 3)</i>					
1:30pm – 3:30pm	SESSION # 7 – Symposia					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
	Symposium 10 <b>Animals in Research</b>	Symposium 11 <b>How brains adapt to the world: A comparison of sensory processing in animal taxa off the beaten track</b>	Symposium 12 <b>Synaptic Dysfunction in Neurodegenerative Diseases</b>	Symposium 13 <b>Brain sex differences in health and disease: animal models to the clinic</b>	Symposium 14 <b>New function for glial cells in the Central Nervous System</b>	Symposium 15 <b>Knowing where you're going: comparative perspectives on a core problem</b>
<b>Session Chairs</b>	Trichur Vidyasagar (The University of Melbourne)  Marcello Rosa (Monash University)	Miriam Henze (The University of Queensland)  Hanne Thoen (The University of Queensland)	Iryna Leshchynska (The University of New South Wales)  Jocelyn Widagdo (The University of Queensland)	Rachel Hill (Monash University)	Junhua Xiao (University of Melbourne)	Andrew Barron (Macquarie University)  Ajay Narendra (Macquarie University)

## DAY 3 – TUESDAY 5 DECEMBER

1:30pm – 3:30pm						
SESSION # 7 – Symposia continued						
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
1:30 – 2:00	1:30-1:50 <b>Colin Blakemore</b> (University of London, UK) "TBA"	<b>Kara E. Yopak</b> (University of North Carolina Wilmington, USA) <i>"Is bigger always better? Developing quantitative measures of cognitive ability in sharks and their relatives"</i>	<b>Lars M. Ittner</b> (The University of New South Wales) <i>"Regulation of post-synaptic signalling by the Alzheimer protein tau"</i>	<b>Arthur P. Arnold (USA)</b> (University of California, Los Angeles) <i>"The Origins of Sex Differences in Brain Physiology and Disease: Hormones and Sex Chromosomes"</i>	<b>David Attwell</b> (University College London, UK) <i>"Control of brain blood flow by pericytes and astrocytes"</i>	<b>Jochen Zeil</b> (Australian National University) <i>"Navigating brains: acquiring and using views for homing"</i>
2:00 – 2:30	1:50-2:10 <b>Michael Goldberg</b> (Columbia University College of Physicians and Surgeons, USA) "TBA"	<b>Wen-Sung Chun</b> (The University of Queensland) <i>"Cephalopods - Soft-bodied predators with big brains"</i>	<b>Emily Handley</b> (University of Tasmania) <i>"TDP-43-mediated synaptic alterations in the pathogenesis of TDP43 proteinopathies"</i>	<b>Wah Chin Boon</b> (The Florey Institute for Neuroscience and Mental Health) <i>"The Influence of Steroid Hormones on Autism Development"</i>	<b>Jiawei Zhou</b> (Chinese academy of Sciences, China) <i>"Balancing the innate immune system in the brain"</i>	<b>Karin Nordstrom</b> (Flinders University) <i>"Hoverfly vision in naturalistic surrounds"</i>
2:30 – 3:00	2:10-2:30 <b>Kirk Leech</b> (European Animal Research Association) "TBA"	<b>Yuri Ogawa Kato</b> (Macquarie University) <i>"Visual adaptations in hymenopterans: Polarization sensitivity of honeybee ocelli"</i>	<b>Vladimir Sytnyk</b> (The University of New South Wales) <i>"Disruption in synaptic adhesion in Alzheimer's disease"</i>	<b>Joohyung Lee</b> (Hudson Institute of Medical Research) <i>"A Genetic Basis for Male Susceptibility to Neurological Disorders"</i>	<b>Ilan Gobius</b> (University of Queensland) <i>"Astroglia regulate interhemispheric connectivity in the developing brain"</i>	<b>Adam Morris</b> (Monash University) <i>"How the primate visual system takes into account an ever-moving eye"</i>
2:30 – 3:00	2:30-2:50 <b>Jacqueline Phillips</b> (Macquarie University) "TBA"					
3:00 – 3:30	2:50-3:30 <b>Panel Discussion</b>	<b>Ximena Nelson</b> (University of Canterbury, NZ) <i>"Can spiders get 'bored'?"</i>	<b>Victor Anggono</b> (The University of Queensland) <i>"The ubiquitination of AMPA receptors underlies A<sup>-</sup>-induced synaptic depression"</i>	<b>Nicolas Cherbuin</b> (Australian National University) <i>"Physical, brain and cognitive health: the subtle effect of sex"</i>	<b>Jessica Fletcher</b> (The University of Melbourne) <i>"TrkB activation promotes myelin repair in the brain"</i>	<b>Franne Kamhi</b> (Macquarie University) <i>"Processing of spatial information by the ant brain"</i>



## **DAY 3 – TUESDAY 5 DECEMBER**

3:30pm – 4:00pm	<b>Afternoon Tea, Exhibition and Poster Displays</b> <i>The Gallery (Level 3)</i>
4:00pm – 4:30pm	<b>Campbell Award Keynote</b> <i>Darling Harbour Theatre</i>
4:30pm – 5:00pm	<b>Kondelos Award Keynote</b> <i>Darling Harbour Theatre</i>
5:00pm – 6:30pm	<b>ANS Annual General Meeting</b> <i>Darling Harbour Theatre</i>
6:30pm – 7:00pm	Break/Walking time
7:00pm – 10:45pm	<b>Conference Gala Dinner</b> <i>Starship Sydney</i>

## DAY 4 – WEDNESDAY 6 DECEMBER

7:30am	<b>Registration Desk Opens</b>					
7:00am – 8:00am	<b>ANS Student Body Committee Meeting</b> <i>ICC Level 3 Room C3.1</i>					
9:30am – 9:45am	<b>Exhibition and Poster Displays</b> <i>The Gallery</i>					
10:00am – 12:00pm	<b>SESSION # 8 – Symposia</b>					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
	Symposium 16 <b>Chronic neuroinflammatory mechanisms and their role in Parkinson's disease progression</b>	Symposium 17 <b>New mechanisms and treatments for motor neuron disease</b>	Symposium 18 <b>Motion Processing in Monkey Middle Temporal Area: Computations and Physiology</b>	Symposium 19 <b>Epigenetic mediators of brain function and dysfunction</b>	Symposium 20 <b>Emerging Strategies for Improving Stroke Outcomes</b>	Symposium 21 <b>Interrogating large scale brain circuits</b>
<b>Session Chairs</b>	Trent Woodruff (The University of Queensland)	Adam Walker (Macquarie University) Julie Atkin (Macquarie University)	Michael Ibbotson (Monash University)	Anthony Hannan (The Florey Institute of Neuroscience and Mental Health, University of Melbourne)	James Bourne (Monash University) Leon Teo (Monash University)	Yan Tat Wong (Monash University) Tristan Chaplin (Monash University)
10:00 – 10:30	Antony Cooper (Garvan Institute of Medical Research) <i>"Neurogenomic analyses of multiple brain regions from idiopathic Parkinson's disease patients reveals insights into neuroinflammation"</i>	Aaron Gitler (Stanford, USA) <i>"Talk title"</i>	Tony Movshon (New York University, USA) <i>"Organisation of the spatiotemporal receptive fields of macaque MT neurons"</i>	John Mattick (The Garvan Institute of Medical Research) <i>"Roles of regulatory RNA in brain development, function and disease"</i>	Brad Broughton (Monash University) <i>"Acute or delayed post-stroke administration of human amnion epithelial cells improves outcomes"</i>	Bijan Pesaran (New York University, USA) <i>"Transforming sensory inputs into motor acts: Insights from looking, reaching and speaking"</i>
10:30 – 11:00	Nicolas Dzamko (University of Sydney) <i>"Alpha-synuclein and LRRK2, it takes TLR2 to tango"</i>	Tracey Dickson (University of Tasmania) <i>"Getting the balance right: targeting excitatory dysfunction in the ALS cortex"</i>	James Bourne (Monash University) <i>"Early-life lesions of the pulvinars alter visual cortical anatomy and behaviour"</i>	Timothy Bredy (The University of Queensland) <i>"DNA modification and experience-dependent plasticity: moving beyond 5mC"</i>	Renee Turner (University of Adelaide) <i>"Improving clinical translation in stroke: Targeting cerebral oedema in an Ovine model"</i>	Saba Gharaei (Australian National University) <i>"The role of superior colliculus in cortical processing of sensory information"</i>
11:00 – 11:30	Juliet Taylor (The University of Melbourne) <i>"Modulation of neuroinflammation in Parkinson's disease: role of the type-1 interferons"</i>	Peter Crouch (University of Melbourne) <i>"Therapeutically targeting copper malfunction to treat sporadic ALS"</i>	Elizabeth Zavitz (Monash University) <i>"How is motion information transformed between V1 and MT?"</i>	Ian Maze (Icahn School of Medicine at Mount Sinai, USA) <i>"Chromatin dysregulation in Down syndrome and other brain disorders"</i>	Neil Spratt (University of Newcastle) <i>"Short-duration hypothermia prevents intracranial pressure elevation and reduces infarct volume"</i>	Andrew Zalesky (University of Melbourne) <i>"Brain connectivity dynamics in health and disease"</i>

## DAY 4 – WEDNESDAY 6 DECEMBER

10:00am – 12:00pm	SESSION # 8 – Symposia continued					
	Darling Harbour Theatre	Meeting Room C3.1	Meeting Room C3.2	Meeting Room C3.3	Meeting Room C3.4	Meeting Room C3.6
11:30 – 12:00	<p>Richard Gordon (The University of Queensland)</p> <p><i>“Targeting the NLRP3 inflammasome in PD using orally active small molecule drugs”</i></p>	<p>Kelly Williams (Macquarie University)</p> <p><i>“Identical twins discordant for ALS: insights from genome, transcriptome and epigenome data”</i></p>	<p>David Grayden (University of Melbourne)</p> <p><i>“A computational neural network model of pattern and component motion in area MT”</i></p>	<p>Terence Pang (The Florey Institute of Neuroscience and Mental Health, University of Melbourne)</p> <p><i>“Epigenetic mechanisms mediating transgenerational paternal transmission of acquired traits”</i></p>	<p>Julie Bernhardt (The Florey Institute of Neuroscience and Mental Health)</p> <p><i>“Emerging rehabilitation interventions for people with stroke”</i></p>	<p>Maureen Hagan (Monash University)</p> <p><i>“Examining how distributed networks communicate through hierarchical processing in the visual system”</i></p>
12:00pm – 1:30pm	<p><b>Lunch, Exhibition and Poster Displays</b> <i>The Gallery (Level 3)</i></p>					
1:30pm – 3:30pm	<p><b>Presidential Symposium</b> <i>Darling Harbour Theatre</i></p> <p>Rafael Yuste (Kavli Institute for Brain Science) Shigeo Okabe (University of Tokyo) Sung-Jin Jeong (Hang Yang University, Seoul) Miyoung Chun (Kavli Foundation) Christoph Ebell (Human Brain Project) Miri Polacheck (Israel Brain Technologies)</p>					
3:30pm – 4:00pm	<p><b>Afternoon Tea, Exhibition and Poster Displays</b> <i>The Gallery (Level 3)</i></p>					
4:00pm – 5:00pm	<p><b>Plenary 4 – The Lawrie Austin Plenary Lecture – Prof Andrew Lawrence (Florey Institute of Neuroscience &amp; Mental Health)</b> <i>Darling Harbour Theatre</i></p>					
5:00pm – 5:30pm	<p><b>Presentation of Awards and Conference Close</b> <i>Darling Harbour Theatre</i></p>					