Australasian Neuroscience Society Annual Scientific Meeting 2016
Hotel Grand Chancellor, Hobart, December 4th – December 7th, 2016

Sunday December 4th	
3:30pm – 7.00pm	**Registration Desk Open** *Mezzanine Level*
4.45pm – 5.00pm	**Opening Ceremony and Official Welcome – *Welcome to Country and Professor James Vickers (President ANS) address*** *Concert Hall*
5.00pm – 6.00pm	**Plenary 1 - International Plenary, Michael Hausser, University College London** *Concert Hall*
6.00pm – 7.00pm	**Welcome Reception** *Federation Ballroom*

Monday December 5th					
7:30am	Registration Open				
8.30am – 10.30am	**SESSION # 1 – Symposium**				
	Concert Hall	**Grand Ballroom 1**	**Grand Ballroom 2**	**Grand Ballroom 3**	**Harbour View Room 1**
	Symposia 1	Symposia 2	Symposia 3	Symposia 4	Symposia 5
Title:	**The cytoskeleton: leading the way in development and disease (LOC)**	**Neuron-glial interactions and gliogenesis in the CNS**	**Connecting the Dots: Understanding integrative brain function**	**Motor Cortex Excitability in Health and Disease**	**Genetic dissection of hypothalamic neural networks**
Chairperson(s):	*Anna King & Catherine Blizzard (University of Tasmania)*	*Tobias Merson (University of Melbourne) and Stan Mitew (Florey Institute of Neuroscience and Mental Health)*	*Garry Egan (Monash University) and Pankaj Sah (Queensland Brain Institute)*	*Ruth Empson (University of Otago) and Tracey Dickson (University of Tasmania)*	*Zane Andrews (Monash University)*
Presenters:	**Erika Holzbaur** (University of Pennsylvania) *Action at a distance: long distance trafficking in neuronal homeostasis and neurodegeneration*	**Kaylene Young** (University of Tasmania) *Repetitive transcranial magnetic stimulation increases oligodendrogenesis in the adult mouse brain*	**Hamish Meffin** (University of Melbourne) *Predictive coding in receptive field formation in visual cortex*	**Rosemary Clark** (University of Tasmania) *Subtype-specific alteration of inhibitory circuits in the primary motor cortex in motor neuron disease: a cellular basis for cortical pathophysiology*	**Joel Elmquist** (University of Texas) *Using Mouse Genetics to Unravel the CNS Pathways Controlling Energy Balance and Glucose Homeostasis*

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	Helen Cooper (University of Queensland) *Riding the wave - linking the actin cytoskeleton to cortical stem cell morphology and function* **Thomas Fath** (University of New South Wales) *Targeting The Actin Cytoskeleton to Manipulate Neurite Outgrowth in Central Nervous System Neurons* **Lisa Foa** (University of Tasmania) *STIM1, the intersection of calcium signaling and the cytoskeleton in navigating growth cones*	**Alain Chédotal** (Institut national de la santé et de la recherche médicale) *New strategies to study myelination, demyelination and remyelination in the CNS* **Brad Turner** (Florey Institute of Neuroscience and Mental Health) *T-Regulatory Cell Modulation of Glial Cell Activation and Neurodegeneration in A Mouse Model of Amyotrophic Lateral Sclerosis* **Jens Bunt** (University of Queensland) *Regulation of glial differentiation by Nuclear factor I in cortical development, developmental disorders and brain cancer*	**Roger Marek** (University of Queensland) *Attentional modulation of prefrontal circuits that mediate fear extinction* **Allan Jones** (Allen Institute for Brain Science, Seattle) *Components, computation, cognition: new directions, tools, and resources from the Allen Institute for Brain Science.* **Ehsan Arabzadeh** (Australian National University) *A Rodent Model of Sensory Decision-Making: Neuronal Correlates of Sensory Prioritisation*	**Steve Vucic** (University of Sydney) *Cortical hyperexcitability: A pathogenic process in ALS/MND* **Andrew Clarkson** (University of Otago) *Modulating Post-Stroke Neuronal Excitability Improves Motor Function* **Ian Duguid** (University of Edinburgh) *Neural representations of movement in the primary motor cortex of awake behaving mice*	**Allan Herbison** (University of Otago) *Optogenetic Analysis of the Hypothalamic Neural Network Controlling Fertility* **Brian Oldfield** (Monash University) *Central Neural Control of Brown and Beige Fat – Neurochemical Characterisation Revisited* **Rosie Brown** (University of Otago) *Population-specific deletion of hypothalamic prolactin receptors identifies a critical role for maternal behaviour*
10:30 – 11:00am	**Morning Tea Break, Exhibition and Poster Displays** *Federation Ballroom*				
11.00am – 1.00pm	**SESSION # 2 – Symposium**				
	Concert Hall	**Grand Ballroom 1**	**Grand Ballroom 2**	**Grand Ballroom 3**	**Harbour View Room 1**
	Symposia 6	Symposia 7	Symposia 8	Symposia 9	Symposia 10
Title:	**Traumatic brain injury and the development of neurodegenerative diseases**	**Cognitive Training & the Aged Brain: Mechanisms, Disease-Specific Efficacy and How to do it at Scale**	**Pathophysiology of the Blood-Labyrinth Barrier**	**Current research approaches in animal models relevant to schizophrenia**	**Vision in invertebrates: Decision making models, neural mechanisms, and quantitative behavior**

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Presenters:	**Victoria Johnson** (University of Pennsylvania) *Acute and Chronic Pathologies of Human TBI: Links to Neurodegenerative Disease* **Sandy Shultz** (University of Melbourne) *The long-term effects, pathobiology, and treatment of mild traumatic brain injuries* **Roberto Cappai** (University of Melbourne) *Delineating The Neuroprotective Role of the Amyloid Precursor Protein in Traumatic Brain Injury – A Novel Therapeutic Agent* **Jenna Ziebell** (University of Tasmania) *Ageing with a traumatic brain injury*	**Verity Chadwick** (University of Sydney) *Gaming for Training: Incorporation of Video Gaming Principles & Practice into Next-Generation Cognitive Training* **Jerri Edwards** (University of Southern Florida) *UFOV Training Improves Everyday Functional Performance and Reduces Risk of Dementia* **Amit Lampit** (University of Sydney) *Cognitive Response Profiles for Computerised Cognitive Training Are Disease-Specific* **Michael Valenzuela** (University of Sydney) *Neural Mechanisms Underlying Therapeutic Benefits of Brain Training*	**Peter Thorne** (University of Auckland) *Use of MRI to Assess the Blood-Labyrinth Barrier* **Daniel Brown** (University of Sydney) *Strial Blood Labyrinth Barrier Damage and Regeneration* **Keik Hirose** (Washington University School of Medicine) *Blood-labyrinth barrier compromise with systemic infection* **Xiaorui Shi** (Oregon Health & Science University) *Strial Blood Labyrinth Barrier Damage and Regeneration*	**Andrea Gogos** (Florey Institute of Neuroscience and Mental Health) *Towards Understanding the Biological Mechanism Underlying Estrogen's Therapeutic Effect in Schizophrenia* **Darryl Eyles** (University of Queensland) *Increased DA synthesis in the adolescent brain. An animal model of the prodrome in schizophrenia.* **Tim Karl** (Western Sydney University) *Modeling Cannabis Exposure in A Variety of Mouse Models for The Schizophrenia Risk Factor Neuregulin 1.* **Lauren Harms** (University of Newcastle) *Animal Models of Maternal Immune Activation and Relevance for Schizophrenia*	**Jan Hemmi** (University of Western Australia) *The effects of sensory limitations on decision-making in fiddler crabs* **Andrew Barron** (Maquarie University) *How honey bees learn abstract concepts* **Justin Marshall** (University of Queensland) *Polarisation Vision – More Than Running Backwards with Poo* **Ximena Nelson** (University of Canterbury) *Visual Target Detection and Identification Decisions in Jumping Spiders*
1:00pm – 2:30pm	**Lunch, Exhibition and Poster Displays** *Federation Ballroom*				
1.15pm – 2.15pm	**Australian and New Zealand Brain Bee Challenge, National Final**				

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	Concert Hall				
2.30pm – 4.00pm	**SESSION # 3 – Oral Sessions**				
	Concert Hall	**Grand Ballroom 1**	**Grand Ballroom 2**	**Grand Ballroom 3**	**Harbour View Room 1**
	Oral Session 1	Oral Session 2	Oral Session 3	Oral Session 4	Oral Session 5
Title:	**Injury and Repair I**	**The Synapse**	**Neurodevelopmental Disease**	**Reward**	**PNS**
Chairperson(s):	*David Howells (University of Tasmania) and Celia Vandestadt (Monash University)*	*Phil Robinson (Children's Medical Research Institute) and Kimberley Pitman (University of Tasmania)*	*Jason Howitt (University of Melbourne) and Carlos Ganter (University of Melbourne)*	*Bruno van Swinderen (The University of Queensland) and Leigh Walker (Florey Institute of Neuroscience and Mental Health)*	*Rainer Haberberger (Flinders University) and Dino Premilovac (University of Tasmania)*
Presenters:	**Victoria Spruance** * (Drexel University) *Neuronal Progenitor Transplantation to Promote Respiratory Recovery Following Cervical Spinal Cord Injury* **Jo Anne Stratton** (University of Calgary) *Realizing The Potential of Adult Human Skin-Derived Schwann Cells for Treating Nervous System Injury* **Annabel Sorby-Adams** * (University of Adelaide) *Characterising the temporal profile of cerebral oedema and intracranial pressure following stroke in an ovine model*	**Adekunle Bademosi** * (University of Queensland) *Single Molecule Imaging of Syntaxin-1a Reveals Change in Lateral Mobility Associated with Neurotransmitter Release In Vivo* **Jess Nithianantharajah** (University of Melbourne) *Genetic Interaction of Disease-Relevant Genes Modulates Selective Components of Cognition in Touchscreen Assays* **Cheryl Shoubridge** (University of Adelaide) *Functional Deficit of Iqsec2 with Missense Mutations Disrupts Normal Dendritic Spine Morphogenesis.*	**Laura Fenlon** * (University of Queensland) *Spatial and temporal features of callosal axon innervation, exuberance and elimination during mouse development involve activity-dependent and -independent events* **Olivier Clement** (University of Western Australia) *Disease-Associated Mutations to Rp58 Alter Its Capacity to Promote Cell Migration and Neurite Outgrowth Within the Developing Cerebral Cortex* **Paul Lockhart** (Murdoch Childrens Research Institute) *Mutations in DCC Cause Agenesis of the Corpus Callosum and Mirror Movements Associated with A*	**Sophia Luikinga** * (University of Melbourne) *Understanding Escalation of Methamphetamine Intake in Adolescent Rats* **Rachel Clarke** * (Monash University) *Hunger-Sensing Agrp Neurons Modulate Stress and Anxiety Behaviour in Response to Restraint Stress* **Christina Perry** (University of Melbourne) *Rxfp-3 Antagonism in The Lateral Hypothalamus Increases Alcohol Self-Administration.* **Lei Zhang** (Garvan Institute of Medical Research) *Critical Role of NPY System in the Coordinated Control of*	**Alexandria Driessen** * (University of Queensland) *Anatomical and Functional Evidence That The Paratrigeminal Nucleus Is Involved In Laryngeal Sensory Neuron Regulation Of Respiration.* **Aaron Dingle** (University of Wisconsin) *Osseointegrated Neural Interface (ONI): A novel model for integrating peripheral nerves with robotic prosthetics.* **Lincon Stamp** (University of Melbourne) *Optogenetics Demonstrates Functional Innervation of Colonic Muscle by Neurons Derived from Transplanted Progenitors*

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	Sean Coakley (University of Queensland) *Discovering and studying novel molecules that regulate axonal degeneration.* **Brad Sutherland** (University of Tasmania) *Pericyte Constriction is Associated with No-Reflow Following Ischaemic Stroke*	**Malinda Tantirigama** (Australian National University) *Dendritic Processing of Odour Information in The Mouse Piriform Cortex In Vivo* **Victor Anggono** (University of Queensland) *Pacsin1 Regulates the Dynamics of AMPA Receptor Trafficking* **Sarah Gordon** (University of Melbourne) *Impaired Retrieval of Synaptobrevin to Synaptic Vesicles Causes a Progressive Reduction in Exocytosis*	*Failure of Corticospinal Axonal Decussation* **Jing Lu** (Monash University) *Autism associated miR-873 KO affects neuronal differentiation* **Kristie Lee** (University of Adelaide) *Elucidation of Interneuron Deficit in The Two Most Common ARX Mutations Causative to Intellectual Disability in Children* **Lena Constantin** (University of Queensland) *The Neurodevelopmental and Behavioural Impact of Autism-Risk Genes in Zebrafish*	*Activity and Energy Homeostasis* **Roger Pocock** (Monash University) *Control of Behaviour Through Transcriptional Regulation of Satiety* **Amy Reichelt** (RMIT University) *Impact of High Sucrose Diets On Behavioural Pattern Separation and Neuroproliferation*	**Tara Bautista** (University of Melbourne) *The role of the dorsolateral pons in respiratory-sympathetic coupling: neuroanatomical and in situ electrophysiological studies* **Marlene Hao** (University of Leuven) *Optical Examination of Neuronal Projections and Function During Development of the Enteric Nervous System* **Simon Murray** (University of Melbourne) *Schwann Cell Cholesterol Synthesis Is Regulated by The Neurotrophin BDNF*
4.00pm – 5.30pm	**SESSION # 4 – Oral Sessions**				
	Concert Hall	**Grand Ballroom 1**	**Grand Ballroom 2**	**Grand Ballroom 3**	**Harbour View Room 1**
	Oral Session 6	Oral Session 7	Oral Session 8	Oral Session 9	Oral Session 10
Title:	**Injury and Repair II**	**Glia**	**Neurodevelopment**	**Neurobiology of Behaviour**	**Motor function and disease**
Chairperson(s):	*Renee Morris (University of New South Wales) and Stephanie Plummer (University of Adelaide)*	*Junhua Xiao (University of Melbourne) and Loic Auderset (University of Tasmania)*	*Mirella Dottori (University of Melbourne) and Vanessa Lanoue (University of Queensland)*	*Andy Lawrence and Terence Pang (Florey Institute of Neuroscience and Mental Health)*	*Simon McMullan (Macquarie University) and Merryn Brettle (University of New South Wales)*
Presenters:	**Ryan O'Hare Doig** * (University of Western Australia) *A Combination of Calcium Channel Inhibitors Facilitates Tissue Sparing and Significant*	**Lulu Xing** (University of Melbourne) *Highly efficient conditional ablation of oligodendrocyte progenitor cells (NG2 glia)*	**Rodrigo Suarez** * (University of Queensland) *A Pan-Mammalian Interhemispheric Program Predates the Evolution of the Corpus Callosum*	**Valeria Rytova** * (University of Melbourne) *Chronic Rxfp3 Activation in Ventral Hippocampus and Medial Amygdala Modulates*	**Jayden Clark** (University of Tasmania) *Dose Dependant Effect of Epothilone D on Disease Phenotype in the Sod1g93a Mouse Model of Als*

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	Hind Limb Functional Recovery Following Spinal Cord Injury **Fong Chan Choy** (University of Adelaide) *Reduction of The Neuroprotective Transcription Factor Npas4 Results in Increased Neuronal Necrosis, Inflammation and Brain Lesion Size Following Ischaemia.* **Speros Thomas** * (Monash University) *Axon-specific deletion of nogo receptor 1 (NgR1) preserves axonal transport limiting demyelination in experimental autoimmune encephalomyelitis (EAE)* **Jan Kaslin** (Monash University) *Architectural Transcription Factors Control Neural Stem Cell Quiescence and Activation During Homeostasis and Regeneration* **Michelle Rank** (RMIT University) *Plasticity Beyond the Cortex: Changes in Spinal Cord Interneurons After Cortical Ischemic Stroke*	*induces anxiety-like behaviour in adult mice* **Erica Kim** * (Monash University) *Overcoming monocarboxylate transporter 8 (MCT8)-deficiency to promote human oligodendrocyte differentiation and myelination* **Brian Billups** (Australian National University) *Regulation of Astrocytic Glutamine Release by Intracellular Sodium* **David Gonsalvez** (University of Melbourne) *Oligodendroglial Proliferation Dynamics Are Regulated by Canonical Wnt/B-Catenin Signalling During Development.* **Martin Stebbing** (RMIT University) *Oligodendroglial Proliferation Dynamics Are Regulated by Canonical Wnt/B-Catenin Signalling During Development* **Leon Teo** (Monash University) *Activation of Infant Astrogliosis Pathway Suppresses Glial*	**Conor O'Leary** (University of Queensland) *Disrupted Neogenin Signalling Results in Postnatal Hydrocephalus* **Wing Hei Chan** (University of Melbourne) * *RNA-Seq of FACS Purified Sympathetic Neuronal Progenitor Cells Reveals the Molecular Traits of Cell Fate Decisions* **Julian Heng** (University of Western Australia) *Mutations to genes encoding components of the microtubule assembly pathway underlie brain growth and early onset neurodegeneration* **Dylan Fox** (Monash University) *The Role of the Inferior Pulvinar in The Early Development of Visually-Guided Actions* **Jaime Foong** (University of Melbourne) *Exposure to The Antibiotic Vancomycin Modifies Development of the Enteric*	*Fear, Anxiety and Social Behaviour in Rats* **Emily Jaehne** (La Trobe University) *Interaction of Glucocorticoid Stress Hormone with The BDNF Val66met Genotype to Regulate Prepulse Inhibition of Acoustic Startle, An Endophenotype of Schizophrenia* **Vincent Laurent** (University of New South Wales) *Extinction Generates Outcome-Specific Conditioned Inhibition Mediated by Infralimbic Cortex and Modulated by Dorsal Hippocampus* **Elizabeth Coulson** (University of Queensland) *Neurotrophin signalling regulates cholinergic control of fear extinction* **Richard Vickery** (University of New South Wales) *Tactile Intensity Coded Within Afferent Burst Activity*	**Jasneet Parmar** * (University of New South Wales) *Major contribution of TRPC3 ion channels to calcium loading in mouse cerebellar Purkinje neurons* **Sean Millard** (University of Queensland) *Distinct Roles for Dscam2 Isoforms at The Drosophila Neuromuscular Junction* **Mary Louise Rogers** (Flinders University) *Targeted Non-Viral Gene Delivery to Motor Neurons In-Vivo: Dosing and Time Course* **Angela Laird** (Macquarie University) *A Transgenic Zebrafish Model of Spinocerebellar Ataxia-3 Develops Signs of the Disease Even When Transgenic Expression Is Restricted to Motor Neurons* **Dan Johnstone** (University of Sydney) *Remote Photobiomodulation Is Neuroprotective Against MPTP Insult*

	Nicole Smith (University of Western Australia) *Profiling Remote Secondary Damage and Inflammation Following CNS Trauma*	*Scarring in Adulthood Following a Neocortical Stroke*	*Nervous System in Early Postnatal Mice.*	**Despina Ganella** (University of Melbourne) *Neurodevelopmental Correlates of Fear Extinction: An Fmri Study*	
5.30pm – 6.30pm	Plenary 3 – Eccles Plenary Lecturer – Jeffrey Rosenfeld (Monash University) *Concert Hall*				
6:30pm	Early Career Mixer *The Hobart Brewing Company*				

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Tuesday 6th December					
7:30am	Registration Opens				
8:30am – 9:30am	**Plenary 3 – The ANS Plenary Lecturer ANS Plenary – Massimo Hilliard (University of Queensland)** *Axonal fusion: an alternative mechanism to repair injured axons.* *Concert Hall*				
9:30am – 10:00am	Morning Tea Break, Exhibition and Poster Displays *Federation Ballroom*				
10.00am – 12.00pm	**SESSION # 5 – Symposium**				
	Concert Hall	**Grand Ballroom 1**	**Grand Ballroom 2**	**Grand Ballroom 3**	**Harbour View Room 1**
	Symposia 11	Symposia 12	Symposia 13	Symposia 14	Symposia 15
Title:	**The Next Generation of Brain Machine Interfaces**	**Spinal cord injury: from the bench to the bedside**	**Protectors or destroyers? Decoding the function of microglia in ageing and disease**	**Ion channels in pain and epilepsy-genetics, function and toxins**	**Development of the Enteric Nervous System: Past, Present & Future**
Chairperson(s):	*Maureen Hagan (Monash University)*	*Gila Moalem-Taylor (University of New South Wales)*	*David Small (University of Tasmania)*	*Elena Bagley (University of Sydney)*	*Nick Spencer (Flinders University)*
Presenters:	**Kazuhiko Seki** (National Institute of Neuroscience, Tokyo) *Voluntary movement and spinal interneuronal circuit: non-human primate study* **Yan Wong** (University of Melbourne) *Development of a high-dimensional brain machine interface* **Nicholas Opie** (University of Melbourne) *Stentrode: Minimally Invasive Endovascular Stent-Electrode Array for High-Fidelity, Chronic Recordings of Cortical Neural Activity*	**Cathy Gorrie** (University of Technology, Sydney) *Modulation of connexin43 hemichannels following mild spinal cord injury* **An Do** (University of California) *Application of brain-computer interface for the restoration of walking after spinal cord injury* **Marc Ruitenberg** (University of Queensland) *Intravenous immunoglobulin (IVIg) as an immunomodulatory therapy for acute spinal cord injury*	**Katherine Southam** (University of Tasmania) *What is the role of microglia in Alzheimer's disease?* **Juergen Goetz** (University of Queensland) *Role of Glia in Ultrasound-Mediated Clearance of Protein Aggregates* **Wolfgang Streit** (University of Florida) *Role of microglia in Alzheimer's Disease pathogenesis*	**Chris Reid** (Florey Institute of Neuroscience and Mental Health) *Insights into Cellular Mechanisms in Genetic Epilepsy and Implications for Treatment* **Lyn Griffiths** (Queensland University of Technology) *Molecular Genetics of Migraine* **David Adams** (University of Wollongong) *Modulation of Neuronal Calcium Channels via GABA(B) Receptor Activation by Analgesic Conotoxins*	**Don Newgreen** (Murdoch Childrens Research Institute) *Massive Differential Clonal Expansion in Enteric Neural Progenitor Cells: Luck or What?* **Hideki Enomoto** (Kobe University) *The impact of RET gain-of-function mutation on development of the enteric nervous system* **Michael Gershon** (Columbia University) *Neural control of neurogenesis in enteric nervous system development*

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	Kostantinos Hadjidimitrakis (Monash University**)** *Encoding and Decoding of 3D Reaches from Neural Populations in The Posterior Parietal Cortex of Macaques*	**Sarah Dunlop** (University of Western Australia) *Immediate Cooling and Emergency Decompression (Iced) For Acute Spinal Cord Injury: Feasibility Studies*	**Frederick Walker** (University of Newcastle) *Builders or destroyers: the role of microglia in stroke-induced secondary neurodegeneration.*	**Holger Lerche** (Centre for Integrative Neuroscience, Germany) *Developing new experimental models based on genetic discoveries in the epilepsies*	**Heather Young** (University of Melbourne) *Role of Kif1 binding protein and intracellular signalling pathways in the development of gut innervation*
12:00pm – 2:00pm	Lunch Break, Exhibition and Poster Displays *Federation Ballroom*				
2.00pm – 3.00pm	**Presidential Symposium -** *Concert Hall* *Chair James Vickers* **Women in Neuroscience** **Frances Corrigan (University of Adelaide)** *Neurodegeneration following traumatic brain injury* **Jee Hyun Kim (University of Melbourne)** *Neurobiology of emotional learning across development*				
3.00pm – 4.00pm	AGM *Concert Hall*				
4.30pm	Ferries and Buses depart for tour of the Museum of Old and New Art (MONA)				
5.30pm – 7.30pm	MONA Tour				
7:30pm – 11.00pm	Conference Gala Dinner *MONA*				

Wednesday 7th December					
8:00am	Registration Opens				
8:30am - 9:00am	Light Breakfast, Exhibition and Poster Displays *Federation Ballroom*				
9.00am – 11.00am	**SESSION # 6 – Symposium & Oral Sessions**				
	Concert Hall	**Grand Ballroom 1**	**Grand Ballroom 2**	**Grand Ballroom 3**	**Harbour View Room 1**
	Symposia 16	Oral Session 11	Oral Session 12	Oral Session 13	Oral Session 14
Title:	**Neurophysiology and neuropathology at the nanoscale**	**Sensory Systems**	**CNS Disorders**	**Environment and Epigenetics**	**Dementia and Aging**

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Chairperson(s):	Merja Joensuul *(University of Queensland)*	*Marcello Rosa (Monash University) and Alexander Pietersen (University of Sydney)*	*Kim Powell (University of Melbourne) and Emma Morrisroe (University of Melbourne)*	*Dan Blackmore (University of Queensland) and Thibault Renoir (University of Melbourne)*	*Glenda Halliday (University of Sydney) and Benjamin Trist (University of Sydney)*
Presenters:	**Martin Heine** (Leibniz Institute for Neurobiology) *Traffic and surface dynamics of voltage gated calcium channels* **Yann Gambin** (University of New South Wales) *Prion-like polymerization of Munc18-1 and interactions with synuclein* **Nela Durisci** (University of Queensland) *Synaptic Trafficking of GABAA Receptors with Epilepsy-Causing Mutations Visualized with Super-Resolution Microscopy* **Fred Meunier** (University of Queensland) *Nanoscale imaging of syntaxin1 and Munc18 reveals dynamic change in nanodomains associated with vesicular priming*	**Joseph Fabian** * (University of Adelaide) *Predictive Coding and The 'Silent' Surround of Dragonfly Feature Detecting Neurons.* **Adam Morris** (Monash University) *Primary visual cortex is home to an intrinsic neural "eye tracker".* **Rania Masri** * (University of Sydney) *Characterization of Ganglion Cell Populations in Marmoset Retina*. **Trichur Vidyasagar** (University of Melbourne) *From Feature Perception to Spatial Attention in The Macaque Lateral Intraparietal Cortex (Lip).* **Alex Sykes** (Max Planck Institute of Molecular Cell Biology and Genetics) *Dominant-negative R373C prominin-1 is a post-*	**Claire Homan** * (University of Adelaide) *Induced Pluripotent Stem Cell Model of Pcdh19-Girls Clustering Epilepsy Reveals Roles for This Protocadherin in Regulation of Neuronal Polarity and Differentiation.* **Kenny Ip** (Garvan Medical Research Institute) *Neuropeptide Y (NPY) Is Required Specifically in The Central Amygdala for The Development of Stress-Induced Obesity in Mice* **Juan Olaya** * (Neuroscience Research Australia) *Schizophrenia Patients Carrying Neuregulin 1 (Nrg1) Risk Alleles (Hapice) With Elevated Levels of Nrg1 Type Iii Have Exacerbated Inhibitory Interneuron Pathology in The Dorsolateral Prefrontal Cortex* **Ye Jin Chai** * (University of Queensland)	**Shlomo Yeshurun** * (University of Melbourne) *Paternal Environmental Enrichment Alters Affective Behavioural and Physiological Phenotypes in F2 Offspring but Not in F1 Offspring* **Owen Marshall** (University of Tasmania) *Novel chromatin state transitions occur during neural development* **Lavinia Codd** (University of Queensland) *Exercise Improves Learning and Increases Neurogenesis After an Endothelin-1-Induced Hippocampal Stroke in Adult Mouse* **Helena Parkington** (Monash University) *Maternal obesity–associated hyperactivity in the hippocampus and cortex of the offspring: Only partial rescue by diet reversal at weaning*	**Tia Cummins** * (University of Melbourne) *Neuropathological Markers of Alzheimer's Disease in Vietnam War Veterans with Traumatic Brain Injury & Post-Traumatic Stress Disorder* **Pardeep Kumar** (Jawaharlal Nehru University) *Effects of aging and 17β-estradiol on glucose transporter (GLUT3) and membrane functions in female rat brain: A therapeutic potential drug for Alzheimer's disease* **Xin-Fu Zhou** (University of South Australia) *p75NTR mediates amyloidogenesis through interactions with both β-site amyloid precursor protein cleaving enzyme 1 and amyloid precursor protein* **Jeremy Crook** (University of Wollongong) *Defined Induction of Human Neural Organoids from Induced*

		translational disease of the photoreceptor outer segment **Jason Potas** (Australian National University) *Machine Learning of Dorsal Column Nuclei Surface Potentials to Predict Tactile and Proprioceptive Peripheral Stimuli* **Duncan Sinclair** (Neuroscience Research Australia) *GLUN2B-Containing NMDA Receptors in Interneurons Modulate Auditory-Evoked High Frequency Neural Oscillations in Adulthood* **Maureen Hagan** (Monash University) *Neurons in MT Are Less Likely to Be Direction Selective to Random Dot Stimuli After Chronic V1 Lesion in Adult Marmoset*	*Munc18-1 controls α-synuclein self-replicating aggregation in Early Infantile Epileptic Encephalopathy* **Victoria Lawson** (University of Melbourne) *Differential Effects of Anti-Prion Treatments Highlight Differences in The Pathogenesis of Sporadic and Familial Forms of Prion Disease and Identifies Novel Mode of Action for Pentosan Polysulfate.* **Audrey Ragagnin** (Macquarie University) *ALS-linked mutant cyclin F impedes ER-Golgi trafficking and induces ER stress mediated apoptotic cell death* **Rachel Hill** (University of Melbourne) *Behavioural and Electrophysiological Outcomes in The Poly-I:C Mouse Model of Schizophrenia Following Raloxifene Treatment*. **Bridgette Semple** (University of Melbourne) *Interleukin-1 Receptor Signalling Mediates Seizure Susceptibility After Traumatic*	**Tara Walker** (Center for Regenerative Therapies Dresden) *Systemic Regulation of Exercise-Induced Adult Hippocampal Neurogenesis* **Nicole Jones** (University of New South Wales) *Maternal Obesity Exacerbates Brain Injury Responses Following Hypoxia-Ischemia in Rat Offspring* **Kelly Clemens** (University of New South Wales) *Epigenetic Regulation of Nicotine Seeking in Rats* **Wei Wei** (University of Queensland) *Exploring the role of the epigenetic regulator ING1 in extinction memory*	*Pluripotent Stem Cells Using Gelatin Methacrylate: A Three-Dimensional Model for Studying Development, Disease and Regenerative Medicine* **Bill Bennett** (University of Tasmania) Skilled Motor Learning in Mice – Modulation by Repetitive Transcranial Magnetic Stimulation **Michael Lardelli** (University of Adelaide) *A zebrafish model of familial Alzheimer's disease (fAD) shows dramatic, early changes in behaviour and gene expression and a predisposition to pathological change* **Ben Gu** (University of Melbourne) *Innate phagocytosis by peripheral blood monocytes is altered in Alzheimer's disease* **Lars Ittner** (University of New South Wales) *Tau Regulates Post-Synaptic Signalling and Amyloid-Beta Toxicity in Alzheimer's Disease*

			Injury to The Immature Mouse Brain		
11.15am –12.15pm	**The Lawrie Austin Plenary Lecturer - David Small (University of Tasmania)** *Emerging ideas in Alzheimer's disease research: Abeta, APP and neural network dysfunction* *Concert Hall*				
12.15pm – 1.30pm	Lunch				
1.30pm – 3.30pm	**SESSION # 7 – Symposium**				
	Concert Hall	**Grand Ballroom 1**	**Grand Ballroom 2**	**Grand Ballroom 3**	**Harbour View Room 1**
	Symposia 17	Symposia 18	Symposia 19	Symposia 20	Symposia 21
Title:	**The exciting life of neuronal dendrites**	**Exploring the role of zinc in cognition**	**Blood, inflammation and neurodegeneration**	**Autism spectrum disorders: from human genetics to animal models**	**Integrated approaches to treating pain and other diseases of the central nervous system: From targets to circuits and beyond**
Chairperson(s):	*Greg Stuart (Australian National University)*	*David Finkelstein (Florey Institute of Neuroscience and Mental Health)*	*Peter Crack (University of Melbourne)*	*Jake Gratten (University of Queensland)*	*Mark Hutchinson (University of Adelaide)*
Presenters:	**Michael Hausser** (University College London) *All-optical interrogation of neural circuits*	**Scott Ayton** (Florey Institute of Neuroscience and Mental Health)	**Trent Woodruff** (University of Queensland) *Complement-mediated inflammation drives neurodegeneration in motor*	**Donna Werling** (University of California, San Francisco) *Identification of De Novo Variation Genome-Wide in*	**Chris Langmead** (Monash Institute of Pharmaceutical Sciences)

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	Karl Iremonger (University of Otago) *GnRH Neurons Elaborate a Long-Range Projection with Shared Axonal and Dendritic Functions* **Lucy Palmer** (Florey Institute of Neuroscience and Mental Health) *A balancing act: Dendritic integration during sensory input* **Stephen Williams** (University of Queensland) *Deconstructing retinal circuit computations*	*Huntingtin Over-Expression Causes Zinc Deficiency* **Atshushi Takeda** (University of Shizoka, Japan) *Extracellur Zn2+ Plays A Key Role for B-Amyloid-Mediated Cognitive Decline* **Paul Adlard** (Florey Institute of Neuroscience and Mental Health) *Zinc as A Critical Player in Normal and Pathological Cognitive Decline* **Joseph Lynch** (University of Queensland) *Estimating the free zinc concentration in the glycinergic synaptic cleft*	*neuron and Parkinson's disease and is associated with alterations in peripheral immunity* **Juliet Taylor** (University of Melbourne) *Targeting type-1 interferon signaling to limit neuroinflammation* **Saul Villeda** (University of California, San Francisco) *Aging and Microglia: Understanding resident macrophage communication in the brain* **Iain Campbell** (University of Sydney) *Transcriptional Determinants of Microglia Function - Role of IRF8*	*Autism Families from Whole Genome Sequencing* **Irina Voineagu** (University of New South Wales) *Enhancer RNA expression in the human brain marks genomic regions important for ASD genetics* **Tom Burne** (University of Queensland) *Testing the plausibility of modifiable risk factors for ASD in mouse models* **John Rubenstein** (University of California, San Francisco) *Novel Method to Study the Function of Human Autism (ASD) Risk Alleles*	*Allosteric Modulation of GPCRs in CNS Drug Discovery: Challenges and Opportunities* **Wendy Imlach** (University of Sydney) *Glycinergic Dysfunction in Dorsal Horn Neurons of a Neuropathic Pain Model* **Yves De Koninck** (Laval University) *Targeting Neuronal Chloride Homeostasis for Therapeutics; Implications and Challenges* **Maree Smith** (University of Queensland) *Deconstructing retinal circuit computations*
3.30pm	Student Prizes Announced				
4.00pm	Conference Close				

**Program is subject to change at discretion of the Organising Committee at any stage.*

29/08/2016