

## BIOLOGICAL PSYCHIATRY AUSTRALIA 2015 ANNUAL CONFERENCE - PROGRAM OUTLINE

### Sunday 20 September 2015

**VENUE:** Margarete Ainsworth Building, Neuroscience Research Australia (NeuRA),  
Corner of Barker and Easy Streets, Randwick

16.30 – 16:50 Maxi-taxi shuttles from Coogee Bay Hotel to NeuRA

17.00 **Welcome:** Peter Schofield, Neuroscience Research Australia  
Chair: Cyndi Shannon Weickert, Neuroscience Research Australia  
**Plenary Speaker:** Bitu Moghaddam, University of Pittsburgh, USA  
*"Futuristic" approaches to preclinical models of brain disorders: focus on prevention and symptoms treatment.*

18.00 - 19.00 Light refreshments

### Monday 21 September 2015

**VENUE:** Coogee Bay Hotel Conference Centre,  
Corner of Coogee Bay Road and Arden Street, Coogee

8.00 – 9.00 Enquiry desk manned for talk uploads

9.00 - 9.10 **Opening Address:** Vibeke Catts, Neuroscience Research Australia

9.10 - 10.10 **Symposium: Sex hormones and their wide-ranging effects on psychopathology**

Chair: Andrea Gogos, Florey Institute of Neuroscience and Mental Health  
Kim Felmingham, University of Tasmania

*The Effect of Progesterone on Visual Encoding and Recall of Threatening Stimuli*

Bronwyn Graham, University of New South Wales

*An across species examination of the influence of estradiol on fear extinction*

Andrea Gogos, Florey Institute of Neuroscience and Mental Health

*Comparing the effects of estradiol and its analogues on drug-induced behavioural phenotypes relevant to schizophrenia*

Tertia Purves-Tyson, Neuroscience Research Australia

*Interactions between sex steroid pathways and dopamine-related molecules in rodent midbrain and in the human substantia nigra in schizophrenia*

10.10 - 10.30 **Data Blitz: Synapses and connectivity** (5 minutes each)

Chair: Lauren Harms, University of Newcastle

10.10 Adam Walker, Monash Institute of Pharmaceutical Sciences

*Targeting blood-to-brain kynurenine transport to prevent inflammation-induced depression*

10.15 Dean Wright, University of Melbourne

*N-Acetylcysteine mediates psychiatric, motor and molecular dysfunction in Huntington's disease mice*

10.20 Lena Oestreich, University of New South Wales

*Decreased integrity of the fronto-temporal fibers of the left inferior occipito-frontal fasciculus associated with auditory verbal hallucinations in schizophrenia*

10.25 Thomas Whitford

*Electrophysiological suppression to delayed, self-initiated auditory stimuli in schizotypy: evidence for a 'continuum of psychosis'*

10.30 - 10.50 Morning tea

10.50 - 11.50 **Symposium: Genetics of neurodevelopmental disorders**

Chair: Irina Voineagu, University of New South Wales

Jozef Gecz, University of Adelaide

*Protocadherin 19 epilepsy, autism and intellectual disability limited to females*

Charles Claudianos, Monash University

*Molecular characterization of autism spectrum disorders*

Valsamma Eapen, University of New South Wales

*From genes to behaviour - a neurodevelopmental journey in Tourette Syndrome*

John Christodoulou, University of Sydney

*The Genetics of Rett Syndrome - current state of the field*

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11.50 - 12.10	<b>Data Blitz: Molecular and genetic approaches for psychosis</b> (5 minutes each) Chair: David Lloyd, Neuroscience Research Australia
11.50	Xiaoying Cui, University of Queensland <i>Overexpression of the vitamin receptor in SH5Y5 promotes dopaminergic neuron differentiation</i>
11.55	Zoltan Sarnyai, James Cook University <i>Ketogenic diet normalises schizophrenia-related phenotype in a pharmacological animal model</i>
12.00	Brian Dean, Florey Institute for Neuroscience and Mental Health <i>Changes in cortical NMDA receptors and PSD-95 protein in schizophrenia, mood disorders and suicide</i>
12.05	Janice Fullerton, Neuroscience Research Australia <i>Differential effects of disease associated ST8SIA2 haplotype on cortical white matter in schizophrenia</i>
12.10 - 13.10	Lunch
13.10 - 14.10	<b>Early Career Forum: How to build a collaborative network</b> Chair: Justine Gatt, Neuroscience Research Australia Robin Turner, University of New South Wales <i>How to describe your statistical analysis in grant applications, and when to get a biostatistician on board as a collaborator</i> Peter Schofield, Neuroscience Research Australia <i>Constructing your team for your grant application</i> Sarah Medland, Queensland Institute of Medical Research <i>How to build a collaborative network</i>
14.10 - 15.10	<b>Symposium: The neurobiology of cannabis: Relevance to brain disorders</b> Chair: Tim Karl, Neuroscience Research Australia Discussant: Murat Yucel, University of Melbourne Nathan Gillespie, Virginia Institute for Psychiatry and Behavioural Genetics, USA <i>Associations between schizophrenia, psychosis and cannabis use in a large population-based sample of adult twins</i> Jonathan Arnold, University of Sydney <i>Preclinical studies on the link between cannabis and psychosis: interactions between CBD and THC</i> Nadia Solowij, University of Wollongong <i>Modulation of hippocampal glutamate and GABA by acute administration of <math>\Delta^9</math>-tetrahydrocannabinol and cannabidiol in humans</i> Tim Karl, Neuroscience Research Australia <i>Therapeutic potential of cannabidiol for Alzheimer's disease</i>
15.10 - 15.50	Afternoon tea / BPA Annual General Meeting
15.50 - 16.50	<b>6th Aubrey Lewis Award</b> Chair: Melissa Green, University of New South Wales Irina Voineagu, University of New South Wales <i>The role of non-coding genomic regions in the genetics of autism spectrum disorders</i>
16.50 - 17.00	Set-up of poster boards in Seaview room
17.00 - 18.30	<b>Poster Presentations</b> (Seaview and Seabreeze rooms)
18.30	Social function in the Arden Lounge, Coogee Bay Hotel

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## BIOLOGICAL PSYCHIATRY AUSTRALIA 2015 ANNUAL CONFERENCE - PROGRAM OUTLINE

Tuesday 22 September 2015

**VENUE:** Coogee Bay Hotel Conference Centre,  
Corner of Coogee Bay Road and Arden Street, Coogee

8.30 - 9.00 Enquiry desk manned for talk uploads

9.00 - 10.00 ***Debate: Biomarkers are useful for prognosis and prediction of treatment response in psychiatry***

Chair: Melissa Green, University of New South Wales

Debaters: Cyndi Shannon Weickert, Jayashri Kulkarni, John McGrath, Darryl Eyles

10.00 - 10.30 ***Data Blitz: Emotion, trauma and fear conditioning*** (5 minutes each)

Chair: Divya Metha, University of Queensland

10.00 Steven Siegel, University of Pennsylvania

*Oxytocin reduces amygdala activity, increases social interactions and reduces anxiety-like behaviour*

10.05 Thibault Renoir, Florey Institute of Neuroscience and Mental Health

*Effects of environmental enrichment and exercise in a mouse model of anxiety with cognitive impairment*

10.10 Jee Hyun Kim, Florey Institute of Neuroscience and Mental Health

*Chronic exercise recovers reinstatement of conditioned fear in aging mice*

10.15 Anna Watters, University of Sydney

*Reduced neural reactivity to negative emotion characterises vulnerability for major depression*

10.20 Yann Quidé, University of New South Wales

*Effects of childhood trauma on brain function during emotion processing in psychosis*

10.25 Belinda Liddell, University of New South Wales

*Mechanisms underlying emotion processing in survivors of torture: Preliminary fMRI evidence*

10.30 - 10.50 Morning tea

10.50 - 11.50 ***Symposium: Approaches to understand and target NMDA receptor in biological psychiatry***

Chairs: Cyndi Shannon Weickert, Neuroscience Research Australia & Bitu Moghaddam, University of Pittsburgh

Vibeke Catts, Neuroscience Research Australia

*Evidence for an endogenous deficit in NMDA receptor expression and reduced postsynaptic density NR1 subunit levels in prefrontal cortex of individuals with schizophrenia*

James Meador-Woodruff, University of Alabama

*Abnormalities of NMDA receptor expression and trafficking in schizophrenia*

Lauren Harms, University of Newcastle

*N-Methyl-D-Aspartate (NMDA) receptor hypofunction and mismatch negativity (MMN): novel insights from animal models*

Colleen Loo, University of New South Wales

*Depression symptoms improves with N-Methyl-D-Aspartate (NMDA) receptor blockade (Ketamine)*

11.50 - 12.20 ***Data Blitz: Molecular and therapeutic bases of cognition*** (5 minutes each)

Chair: Ellen Ji, Neuroscience Research Australia

11.50 Zoltan Sarnyai, James Cook University

*Inhibition of glucose metabolism and ATP synthesis differentially alter behaviour in mice*

11.55 Aung Aung Kywe Moe, University of Queensland

*Risperidone treatment in adolescence alters adult behaviour and gene expression nucleus accumbens*

12.00 Kevin Yeung, University of New South Wales

*Fronto-executive cognitive functioning predicts antidepressant response to tDCS*

12.05 Natalie Matosin, University of New South Wales

*Association of novel genetic variants in GRM5 with schizophrenia, cognition and hippocampal volume*

12.10 Ruth Elijah, University of New South Wales

*Modifying N1 amplitude to self-initiated tones with training: Implications for psychosis*

12.15 Kylie Routledge, University of Sydney

*The shared and unique genetic relationship of wellbeing and cognitive function in healthy twins*

12.20 - 13.20 Lunch

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- 13.20 - 14.20 **3rd Isaac Schweitzer Lecture**  
Chair: Elizabeth Scarr, University of Melbourne  
John McGrath, University of Queensland  
*Preventing schizophrenia – easier than you think?*
- 14.20 - 14.50 **Data Blitz: Genetics in psychiatry: From gene regulation to gene expression** (5 minutes each)  
Chair: Thibault Renoir, Florey Institute of Neuroscience and Mental Health
- 14.20 Michael Geaghan, University of Newcastle  
*Upregulation of microRNA biogenesis and the implications for neuronal function*
- 14.25 Juan Olaya, Neuroscience Research Australia  
*Schizophrenia-like phenotypes of a novel transgenic mouse model for neuregulin-1 type III*
- 14.30 Joshua Atkins, University of Newcastle  
*RNA sequencing reveals disruptions caused by CNVs that influence the neuronal-imprinted domain 15q11*
- 14.35 Chad Bousman, University of Melbourne  
*Polygenic plasticity moderates the effects of severe childhood abuse on depressive symptom severity*
- 14.40 Alex Shaw, Neuroscience Research Australia  
*Addressing rare variant contributions to the genetic architecture of bipolar disorder*
- 14.45 Divya Metha, University of Queensland  
*Lifetime stress accelerates epigenetic aging*
- 14.50-15.10 Afternoon tea
- 15.10 - 16.10 **Symposium: Fear and the developing brain across species: Insights into early-life vulnerabilities for anxiety**  
Chair: Kathryn Baker, University of New South Wales,  
Discussant: Rick Richardson, University of New South Wales  
Caitlin Cowan, University of New South Wales  
*Inheriting gut feelings: Probiotics reduce the multi-generational effects of early stress on infant fear memories*  
Kathryn Baker, University of New South Wales  
*Impaired fear extinction retention in adolescence: Age at fear learning or age at extinction?*  
Sarah Whittle, University of Melbourne  
*Early adrenarche is associated with enlarged pituitary gland volume and social anxiety in children*  
Mark Dadds, University of New South Wales  
*From rats to people; are individual differences in childhood anxiety symptoms associated with epigenetic modulation of the cortisol receptor gene?*
- 16.10 - 16.20 **Award Presentations:** Vibeke Catts, Neuroscience Research Australia
- 16.20 - 16.35 **Conference Discussant:** Brian Dean, Florey Institute of Neuroscience and Mental Health
- 16.35 - 16.40 **Conference Close:** Vibeke Catts, Neuroscience Research Australia

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